

Exhibit V

PATENT ASSIGNMENT COVER SHEETElectronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5349392

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	SECURITY INTEREST	
CONVEYING PARTY DATA		
Name		Execution Date
EMPIRE TECHNOLOGY DEVELOPMENT LLC		12/28/2018
RECEIVING PARTY DATA		
Name:	CRESTLINE DIRECT FINANCE, L.P.	
Street Address:	201 MAIN STREET, SUITE 1900	
City:	FORT WORTH	
State/Country:	TEXAS	
Postal Code:	76102	
PROPERTY NUMBERS Total: 2822		
Property Type	Number	
Application Number:	09652011	
Application Number:	12886370	
Application Number:	12886403	
Application Number:	13695276	
Application Number:	13376544	
Application Number:	13321784	
Application Number:	13256215	
Application Number:	13511134	
Application Number:	15681281	
Application Number:	13982251	
Application Number:	13696689	
Application Number:	13699193	
Application Number:	13698776	
Application Number:	14626591	
Application Number:	13814866	
Application Number:	13976440	
Application Number:	13814844	
Application Number:	13988010	
Application Number:	14375115	
Application Number:	13993908	

505302614

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REEL: 048373 FRAME: 0217

COBB_029308

Property Type	Number
Application Number:	13811548
Application Number:	13879289
Application Number:	14548223
Application Number:	14440923
Application Number:	14362907
Application Number:	13879800
Application Number:	13825052
Application Number:	13816574
Application Number:	14009763
Application Number:	14768217
Application Number:	14768218
Application Number:	15584363
Application Number:	15584518
Application Number:	14648460
Application Number:	14770580
Application Number:	13825858
Application Number:	14785566
Application Number:	14760740
Application Number:	14651841
Application Number:	13876016
Application Number:	14898420
Application Number:	15031710
Application Number:	14778977
Application Number:	14894616
Application Number:	14889713
Application Number:	13978109
Application Number:	15101394
Application Number:	14125929
Application Number:	14894814
Application Number:	14767188
Application Number:	15036308
Application Number:	14905729
Application Number:	14001764
Application Number:	14889780
Application Number:	14901696
Application Number:	14891752
Application Number:	14130956
Application Number:	14114738

Property Type	Number
Application Number:	14888564
Application Number:	14488910
Application Number:	14894660
Application Number:	15377666
Application Number:	15031188
Application Number:	15032040
Application Number:	14426161
Application Number:	14394408
Application Number:	15026070
Application Number:	15031713
Application Number:	15101396
Application Number:	15035371
Application Number:	14358708
Application Number:	14967395
Application Number:	15037329
Application Number:	15127086
Application Number:	14485518
Application Number:	14424414
Application Number:	14372294
Application Number:	14448938
Application Number:	14579994
Application Number:	14778601
Application Number:	14340511
Application Number:	14610304
Application Number:	15100989
Application Number:	14466684
Application Number:	15112151
Application Number:	15101009
Application Number:	14399115
Application Number:	15462263
Application Number:	14458202
Application Number:	14278505
Application Number:	14449074
Application Number:	15306471
Application Number:	14449571
Application Number:	14448267
Application Number:	13696062
Application Number:	13505723

Property Type	Number
Application Number:	13805761
Application Number:	13805775
Application Number:	13636778
Application Number:	13825516
Application Number:	13637350
Application Number:	13997886
Application Number:	13814851
Application Number:	14681037
Application Number:	15024040
Application Number:	15122094
Application Number:	14579239
Application Number:	15101935
Application Number:	14447216
Application Number:	14430203
Application Number:	14300846
Application Number:	14298726
Application Number:	14498312
Application Number:	15790864
Application Number:	14515214
Application Number:	15643993
Application Number:	14538615
Application Number:	15687695
Application Number:	15461715
Application Number:	14717498
Application Number:	16194254
Application Number:	12535542
Application Number:	12535530
Application Number:	13380819
Application Number:	12707510
Application Number:	12707523
Application Number:	12770120
Application Number:	12554702
Application Number:	12727935
Application Number:	13878238
Application Number:	12835277
Application Number:	12707496
Application Number:	13132080
Application Number:	12844839

Property Type	Number
Application Number:	12539338
Application Number:	13202988
Application Number:	13148724
Application Number:	14985782
Application Number:	13119896
Application Number:	13123440
Application Number:	13129796
Application Number:	14532475
Application Number:	12543492
Application Number:	12553091
Application Number:	12943219
Application Number:	12761415
Application Number:	12538884
Application Number:	12538881
Application Number:	13263841
Application Number:	13141327
Application Number:	12849828
Application Number:	13203969
Application Number:	13319148
Application Number:	12709060
Application Number:	13129879
Application Number:	13202226
Application Number:	13125925
Application Number:	13260753
Application Number:	13203837
Application Number:	14487112
Application Number:	13255237
Application Number:	13376804
Application Number:	13254970
Application Number:	14039854
Application Number:	13496773
Application Number:	13203977
Application Number:	14368216
Application Number:	13807148
Application Number:	13634199
Application Number:	13641701
Application Number:	14864920
Application Number:	13265778

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REEL: 048373 FRAME: 0221

COBB_029312

Property Type	Number
Application Number:	14006291
Application Number:	13701833
Application Number:	13576929
Application Number:	14160199
Application Number:	13574158
Application Number:	13522422
Application Number:	13318391
Application Number:	13814940
Application Number:	13497255
Application Number:	14425326
Application Number:	14428186
Application Number:	14410902
Application Number:	13322285
Application Number:	13514284
Application Number:	14352613
Application Number:	13254808
Application Number:	13814938
Application Number:	13818305
Application Number:	13576916
Application Number:	14028384
Application Number:	14441396
Application Number:	14355826
Application Number:	14241004
Application Number:	13878947
Application Number:	13579927
Application Number:	13510925
Application Number:	13508985
Application Number:	13391573
Application Number:	14338631
Application Number:	14117097
Application Number:	13643874
Application Number:	14146354
Application Number:	14007324
Application Number:	13637322
Application Number:	13817113
Application Number:	13499746
Application Number:	13817694
Application Number:	14957775

Property Type	Number
Application Number:	13977918
Application Number:	15140752
Application Number:	14430917
Application Number:	13810815
Application Number:	15051857
Application Number:	14357854
Application Number:	14349001
Application Number:	14124094
Application Number:	13817357
Application Number:	14408928
Application Number:	14000377
Application Number:	14239642
Application Number:	14130017
Application Number:	14114154
Application Number:	15449815
Application Number:	13819715
Application Number:	14004371
Application Number:	14007547
Application Number:	14114087
Application Number:	13876558
Application Number:	14004850
Application Number:	13990429
Application Number:	14408563
Application Number:	14239635
Application Number:	13879799
Application Number:	14390624
Application Number:	14907401
Application Number:	14126382
Application Number:	13989656
Application Number:	14006309
Application Number:	15060993
Application Number:	16039468
Application Number:	14403710
Application Number:	14127192
Application Number:	15924535
Application Number:	14357867
Application Number:	14763919
Application Number:	14441468

Property Type	Number
Application Number:	13985761
Application Number:	14122971
Application Number:	15056055
Application Number:	14765395
Application Number:	14647603
Application Number:	14358770
Application Number:	13855590
Application Number:	14652203
Application Number:	14422287
Application Number:	15657465
Application Number:	14421309
Application Number:	14006310
Application Number:	14363075
Application Number:	14358990
Application Number:	14365324
Application Number:	14410056
Application Number:	14412412
Application Number:	14647655
Application Number:	14408753
Application Number:	14361705
Application Number:	15110953
Application Number:	14438522
Application Number:	14386644
Application Number:	14372958
Application Number:	16155530
Application Number:	14781134
Application Number:	14655407
Application Number:	14408560
Application Number:	14894897
Application Number:	14368449
Application Number:	14894858
Application Number:	14374144
Application Number:	14409526
Application Number:	14409464
Application Number:	15367031
Application Number:	15109568
Application Number:	15312203
Application Number:	14382659

Property Type	Number
Application Number:	14408768
Application Number:	14431490
Application Number:	14438521
Application Number:	15459292
Application Number:	14409530
Application Number:	15299840
Application Number:	15128427
Application Number:	15507389
Application Number:	14434227
Application Number:	14443902
Application Number:	14390629
Application Number:	15296206
Application Number:	14648001
Application Number:	14387081
Application Number:	15429881
Application Number:	14376532
Application Number:	14787135
Application Number:	14440239
Application Number:	15589019
Application Number:	15031394
Application Number:	15318650
Application Number:	14428244
Application Number:	15203407
Application Number:	15483418
Application Number:	15504047
Application Number:	14785882
Application Number:	15317904
Application Number:	15122001
Application Number:	15125917
Application Number:	15119044
Application Number:	14432123
Application Number:	15518122
Application Number:	15510260
Application Number:	14647701
Application Number:	15786165
Application Number:	14435388
Application Number:	14439898
Application Number:	15092229

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REEL: 048373 FRAME: 0225

COBB_029316

Property Type	Number
Application Number:	14439987
Application Number:	15540055
Application Number:	14442187
Application Number:	14767165
Application Number:	15500928
Application Number:	14768960
Application Number:	15540317
Application Number:	15564794
Application Number:	14777668
Application Number:	14905837
Application Number:	13817926
Application Number:	13701131
Application Number:	13825272
Application Number:	13809482
Application Number:	13878707
Application Number:	13877578
Application Number:	13882491
Application Number:	15049537
Application Number:	13813209
Application Number:	14441622
Application Number:	14130128
Application Number:	14007560
Application Number:	15864068
Application Number:	13983654
Application Number:	13976661
Application Number:	13995794
Application Number:	14408135
Application Number:	15200648
Application Number:	14352266
Application Number:	14342377
Application Number:	15626231
Application Number:	13978850
Application Number:	15098740
Application Number:	14008377
Application Number:	14232172
Application Number:	13981544
Application Number:	14333943
Application Number:	14371706

Property Type	Number
Application Number:	14370399
Application Number:	15973455
Application Number:	15477784
Application Number:	14358056
Application Number:	14118649
Application Number:	15843174
Application Number:	14372104
Application Number:	14234309
Application Number:	15112165
Application Number:	14343653
Application Number:	14382662
Application Number:	15092773
Application Number:	15705726
Application Number:	15953229
Application Number:	15114411
Application Number:	15117165
Application Number:	15115273
Application Number:	14378184
Application Number:	14384887
Application Number:	15117169
Application Number:	14916546
Application Number:	15726570
Application Number:	15804283
Application Number:	14278802
Application Number:	15117375
Application Number:	15707436
Application Number:	15991734
Application Number:	14384825
Application Number:	14384870
Application Number:	14425591
Application Number:	14454121
Application Number:	14440236
Application Number:	15684369
Application Number:	14301554
Application Number:	14955199
Application Number:	15277678
Application Number:	15864657
Application Number:	14296380

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REEL: 048373 FRAME: 0227

COBB_029318

Property Type	Number
Application Number:	15934891
Application Number:	14384917
Application Number:	14305691
Application Number:	14456107
Application Number:	14518144
Application Number:	14492938
Application Number:	14491937
Application Number:	15622385
Application Number:	14480041
Application Number:	14617165
Application Number:	14434062
Application Number:	14787849
Application Number:	14761389
Application Number:	12541171
Application Number:	12551175
Application Number:	14325501
Application Number:	14992147
Application Number:	12506259
Application Number:	12551164
Application Number:	12504684
Application Number:	12195786
Application Number:	12257140
Application Number:	14100296
Application Number:	12550197
Application Number:	12554949
Application Number:	12550473
Application Number:	12551065
Application Number:	12648081
Application Number:	13709670
Application Number:	12550697
Application Number:	12638154
Application Number:	14577932
Application Number:	13254153
Application Number:	12750304
Application Number:	13619620
Application Number:	13102896
Application Number:	13130842
Application Number:	13390580

Property Type	Number
Application Number:	13395839
Application Number:	13263998
Application Number:	13202269
Application Number:	14129035
Application Number:	14590758
Application Number:	13147926
Application Number:	14946216
Application Number:	13582831
Application Number:	15463203
Application Number:	13498556
Application Number:	13859665
Application Number:	13949125
Application Number:	13497494
Application Number:	14988413
Application Number:	13378993
Application Number:	13643957
Application Number:	13700393
Application Number:	14717644
Application Number:	15008143
Application Number:	14397302
Application Number:	14399277
Application Number:	13576339
Application Number:	15050856
Application Number:	13641126
Application Number:	13582741
Application Number:	14440842
Application Number:	14661888
Application Number:	13635632
Application Number:	14128477
Application Number:	13978949
Application Number:	15933424
Application Number:	14350746
Application Number:	14409978
Application Number:	14769819
Application Number:	13822201
Application Number:	14974240
Application Number:	14782787
Application Number:	14402090

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REEL: 048373 FRAME: 0229

COBB_029320

Property Type	Number
Application Number:	14383895
Application Number:	14369913
Application Number:	14648692
Application Number:	14123199
Application Number:	14833082
Application Number:	14715114
Application Number:	14407761
Application Number:	14371322
Application Number:	14782240
Application Number:	14780996
Application Number:	14354112
Application Number:	14354116
Application Number:	15345901
Application Number:	14481439
Application Number:	14520358
Application Number:	14905815
Application Number:	14522577
Application Number:	15611886
Application Number:	14830547
Application Number:	15355616
Application Number:	14549895
Application Number:	14640465
Application Number:	14809793
Application Number:	14924341
Application Number:	14524690
Application Number:	14716443
Application Number:	14933049
Application Number:	14824754
Application Number:	14706926
Application Number:	14660370
Application Number:	14694250
Application Number:	15326481
Application Number:	15326482
Application Number:	15290161
Application Number:	12666954
Application Number:	14092301
Application Number:	12593574
Application Number:	13793745

Property Type	Number
Application Number:	12530553
Application Number:	14054673
Application Number:	12597743
Application Number:	12665613
Application Number:	13314894
Application Number:	12665710
Application Number:	12544839
Application Number:	12663060
Application Number:	14194312
Application Number:	12663078
Application Number:	12663082
Application Number:	12601748
Application Number:	13767094
Application Number:	12601968
Application Number:	12664723
Application Number:	12161760
Application Number:	12598288
Application Number:	11783892
Application Number:	12600002
Application Number:	12664242
Application Number:	12665027
Application Number:	14088737
Application Number:	12665298
Application Number:	12666971
Application Number:	12640986
Application Number:	12642110
Application Number:	12564695
Application Number:	12641079
Application Number:	12639836
Application Number:	12665015
Application Number:	13252428
Application Number:	12642279
Application Number:	13193137
Application Number:	12642392
Application Number:	12665020
Application Number:	12665434
Application Number:	12665320
Application Number:	12540766

Property Type	Number
Application Number:	12614014
Application Number:	13369136
Application Number:	12665107
Application Number:	12640967
Application Number:	12568188
Application Number:	12665153
Application Number:	12665295
Application Number:	12642407
Application Number:	12645113
Application Number:	12628850
Application Number:	12631623
Application Number:	12550629
Application Number:	12624972
Application Number:	12641662
Application Number:	12641115
Application Number:	14335583
Application Number:	12645085
Application Number:	12645309
Application Number:	13682669
Application Number:	12559228
Application Number:	12647711
Application Number:	12641991
Application Number:	12708054
Application Number:	12645385
Application Number:	12691462
Application Number:	13201607
Application Number:	13683894
Application Number:	12960259
Application Number:	12762474
Application Number:	13775882
Application Number:	12969011
Application Number:	13000456
Application Number:	12855908
Application Number:	12645495
Application Number:	12645176
Application Number:	12644660
Application Number:	13834941
Application Number:	12778352

Property Type	Number
Application Number:	12999469
Application Number:	12643434
Application Number:	12645496
Application Number:	13201124
Application Number:	13000796
Application Number:	12993641
Application Number:	13058944
Application Number:	13131152
Application Number:	12644754
Application Number:	13392966
Application Number:	13791692
Application Number:	14690396
Application Number:	12770008
Application Number:	13439209
Application Number:	13139709
Application Number:	13139819
Application Number:	14152271
Application Number:	12968952
Application Number:	13362062
Application Number:	12895494
Application Number:	12993465
Application Number:	12895544
Application Number:	13062496
Application Number:	12968984
Application Number:	12993094
Application Number:	13122957
Application Number:	13000421
Application Number:	14083279
Application Number:	13124558
Application Number:	13062516
Application Number:	13000127
Application Number:	12999628
Application Number:	13122877
Application Number:	13122961
Application Number:	13260154
Application Number:	14460227
Application Number:	13264977
Application Number:	13143715

Property Type	Number
Application Number:	13552325
Application Number:	13148174
Application Number:	13262898
Application Number:	14310034
Application Number:	13133614
Application Number:	13577729
Application Number:	13127301
Application Number:	13119731
Application Number:	13445254
Application Number:	13144544
Application Number:	13122912
Application Number:	14660769
Application Number:	10084480
Application Number:	10639471
Application Number:	10680157
Application Number:	13143173
Application Number:	14562533
Application Number:	13320733
Application Number:	13519296
Application Number:	13421947
Application Number:	13379211
Application Number:	13203966
Application Number:	13395540
Application Number:	13704329
Application Number:	13143096
Application Number:	13142372
Application Number:	13143093
Application Number:	13126155
Application Number:	13992737
Application Number:	14002981
Application Number:	13132890
Application Number:	13256670
Application Number:	13823193
Application Number:	13395119
Application Number:	14517094
Application Number:	14000198
Application Number:	13254635
Application Number:	13879457

Property Type	Number
Application Number:	13264981
Application Number:	13148919
Application Number:	13860432
Application Number:	13522299
Application Number:	13641095
Application Number:	13388663
Application Number:	13503690
Application Number:	13878733
Application Number:	13514036
Application Number:	13518840
Application Number:	14054195
Application Number:	14293448
Application Number:	14565894
Application Number:	13641843
Application Number:	13522932
Application Number:	14510027
Application Number:	14110442
Application Number:	13504473
Application Number:	13981495
Application Number:	13517974
Application Number:	13266579
Application Number:	14540192
Application Number:	15170131
Application Number:	13640781
Application Number:	15011721
Application Number:	13642689
Application Number:	13497636
Application Number:	14517262
Application Number:	15830280
Application Number:	13640888
Application Number:	13519308
Application Number:	15093702
Application Number:	13582009
Application Number:	13809539
Application Number:	13577508
Application Number:	13426868
Application Number:	13582710
Application Number:	13880034

Property Type	Number
Application Number:	13881144
Application Number:	13703657
Application Number:	14728740
Application Number:	13514012
Application Number:	13642115
Application Number:	13575367
Application Number:	13702934
Application Number:	14805364
Application Number:	13519303
Application Number:	13879244
Application Number:	13641242
Application Number:	13641288
Application Number:	13583779
Application Number:	14009098
Application Number:	13989792
Application Number:	13881731
Application Number:	14541161
Application Number:	13576383
Application Number:	13988304
Application Number:	13533774
Application Number:	13824276
Application Number:	13977318
Application Number:	13990427
Application Number:	13817803
Application Number:	14435205
Application Number:	13819793
Application Number:	13697294
Application Number:	13979994
Application Number:	13980027
Application Number:	13817775
Application Number:	13813333
Application Number:	14706393
Application Number:	13820714
Application Number:	15137301
Application Number:	13641565
Application Number:	13885394
Application Number:	14781551
Application Number:	13991405

Property Type	Number
Application Number:	14908899
Application Number:	13878512
Application Number:	15014072
Application Number:	13809012
Application Number:	13814654
Application Number:	15290110
Application Number:	14787476
Application Number:	13808418
Application Number:	13994094
Application Number:	13980577
Application Number:	14889556
Application Number:	14766365
Application Number:	15115012
Application Number:	13992218
Application Number:	14769285
Application Number:	14909033
Application Number:	14650555
Application Number:	15309179
Application Number:	13992745
Application Number:	14786473
Application Number:	14004653
Application Number:	13995312
Application Number:	14349656
Application Number:	14771873
Application Number:	14906530
Application Number:	14784535
Application Number:	14118315
Application Number:	15973452
Application Number:	13922780
Application Number:	15449019
Application Number:	15036369
Application Number:	14646031
Application Number:	15026611
Application Number:	14346855
Application Number:	15030880
Application Number:	14917278
Application Number:	14002595
Application Number:	14922671

Property Type	Number
Application Number:	14357476
Application Number:	14115030
Application Number:	15106291
Application Number:	14359478
Application Number:	15115622
Application Number:	14897216
Application Number:	15121788
Application Number:	14916573
Application Number:	14398014
Application Number:	15035758
Application Number:	14384979
Application Number:	15122315
Application Number:	15127009
Application Number:	15037789
Application Number:	14443909
Application Number:	15122934
Application Number:	15012585
Application Number:	14890022
Application Number:	14732424
Application Number:	14394475
Application Number:	14769656
Application Number:	14784111
Application Number:	14784427
Application Number:	16108976
Application Number:	15303841
Application Number:	14895637
Application Number:	15121012
Application Number:	14327814
Application Number:	14284579
Application Number:	14895060
Application Number:	14316916
Application Number:	14547703
Application Number:	14444365
Application Number:	14456511
Application Number:	14631872
Application Number:	14808172
Application Number:	14990028
Application Number:	12303686

Property Type	Number
Application Number:	12123121
Application Number:	12198825
Application Number:	12395441
Application Number:	12366800
Application Number:	12545728
Application Number:	12766349
Application Number:	12999130
Application Number:	14483928
Application Number:	13121322
Application Number:	13143521
Application Number:	13119413
Application Number:	13809884
Application Number:	13121791
Application Number:	14297584
Application Number:	13123450
Application Number:	13863313
Application Number:	13132224
Application Number:	13142054
Application Number:	13511844
Application Number:	14982184
Application Number:	13805286
Application Number:	13503813
Application Number:	13700078
Application Number:	14701460
Application Number:	13505650
Application Number:	13695356
Application Number:	14611952
Application Number:	13503827
Application Number:	13805464
Application Number:	14175232
Application Number:	13577411
Application Number:	15387874
Application Number:	13580225
Application Number:	13636794
Application Number:	13989720
Application Number:	13977262
Application Number:	13809384
Application Number:	14304788

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Property Type	Number
Application Number:	13978553
Application Number:	14455043
Application Number:	15067890
Application Number:	13576265
Application Number:	14708724
Application Number:	13636801
Application Number:	14305547
Application Number:	14884195
Application Number:	13642816
Application Number:	14972511
Application Number:	13697243
Application Number:	13575815
Application Number:	13635273
Application Number:	15657869
Application Number:	14235406
Application Number:	13700104
Application Number:	13701349
Application Number:	13534613
Application Number:	13996323
Application Number:	13995840
Application Number:	13996724
Application Number:	13805785
Application Number:	15238178
Application Number:	13701359
Application Number:	13701324
Application Number:	15084879
Application Number:	13701370
Application Number:	13810497
Application Number:	14951685
Application Number:	13825096
Application Number:	13996331
Application Number:	13878153
Application Number:	14926417
Application Number:	13878357
Application Number:	13885754
Application Number:	14693400
Application Number:	15941476
Application Number:	15026606

Property Type	Number
Application Number:	15110466
Application Number:	13882493
Application Number:	13996290
Application Number:	14908340
Application Number:	14376330
Application Number:	15466178
Application Number:	14118090
Application Number:	14124389
Application Number:	14343968
Application Number:	14007635
Application Number:	15297434
Application Number:	14375902
Application Number:	14372925
Application Number:	15294868
Application Number:	15117730
Application Number:	14118707
Application Number:	14130018
Application Number:	14377388
Application Number:	14372340
Application Number:	14377410
Application Number:	14128692
Application Number:	14385015
Application Number:	14377612
Application Number:	14384962
Application Number:	14377393
Application Number:	15822499
Application Number:	14758595
Application Number:	15601135
Application Number:	14785650
Application Number:	15947243
Application Number:	15128957
Application Number:	14388551
Application Number:	15308611
Application Number:	15984367
Application Number:	14785647
Application Number:	15612057
Application Number:	14888850
Application Number:	16035364

Property Type	Number
Application Number:	14298973
Application Number:	14888861
Application Number:	15941130
Application Number:	14784595
Application Number:	14295936
Application Number:	15843067
Application Number:	14334906
Application Number:	14302434
Application Number:	14404002
Application Number:	14487114
Application Number:	14430757
Application Number:	15545448
Application Number:	14574068
Application Number:	14980692
Application Number:	15157557
Application Number:	14110919
Application Number:	13445805
Application Number:	13583540
Application Number:	14117618
Application Number:	13509351
Application Number:	14975690
Application Number:	14891810
Application Number:	13003222
Application Number:	12710508
Application Number:	12714482
Application Number:	12647256
Application Number:	13003235
Application Number:	15489111
Application Number:	12992120
Application Number:	14606672
Application Number:	13140328
Application Number:	12971140
Application Number:	12867177
Application Number:	13063428
Application Number:	13123612
Application Number:	13062936
Application Number:	13394812
Application Number:	13392800

Property Type	Number
Application Number:	13054867
Application Number:	13575549
Application Number:	13264675
Application Number:	14321300
Application Number:	14830268
Application Number:	15837304
Application Number:	13389586
Application Number:	13643273
Application Number:	15382816
Application Number:	13579248
Application Number:	14154850
Application Number:	14492814
Application Number:	13700836
Application Number:	13994438
Application Number:	13939915
Application Number:	14001174
Application Number:	14124007
Application Number:	14000527
Application Number:	14353494
Application Number:	14435747
Application Number:	12200271
Application Number:	12200438
Application Number:	12200043
Application Number:	12202282
Application Number:	12201298
Application Number:	12201329
Application Number:	12400631
Application Number:	14457298
Application Number:	15935849
Application Number:	12478614
Application Number:	14063003
Application Number:	12201403
Application Number:	12201381
Application Number:	12201415
Application Number:	14055447
Application Number:	12200096
Application Number:	12200077
Application Number:	12479280

Property Type	Number
Application Number:	15138383
Application Number:	12390957
Application Number:	12396939
Application Number:	14159196
Application Number:	12487669
Application Number:	12463460
Application Number:	12538879
Application Number:	12487670
Application Number:	12539608
Application Number:	11934564
Application Number:	12389236
Application Number:	13371782
Application Number:	12467943
Application Number:	14256575
Application Number:	12435213
Application Number:	13293932
Application Number:	12503619
Application Number:	13857874
Application Number:	12422172
Application Number:	12467753
Application Number:	12417478
Application Number:	12512823
Application Number:	12511457
Application Number:	12401380
Application Number:	12507550
Application Number:	13246636
Application Number:	12546499
Application Number:	12507683
Application Number:	12511214
Application Number:	12506148
Application Number:	13657630
Application Number:	13657659
Application Number:	12488200
Application Number:	13493841
Application Number:	12492015
Application Number:	12509087
Application Number:	12367287
Application Number:	14563709

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Property Type	Number
Application Number:	15829200
Application Number:	12467919
Application Number:	12497242
Application Number:	12542096
Application Number:	12463969
Application Number:	12367237
Application Number:	12431912
Application Number:	12490702
Application Number:	12396777
Application Number:	13311375
Application Number:	12396787
Application Number:	13564837
Application Number:	12358253
Application Number:	13655471
Application Number:	14530845
Application Number:	14975796
Application Number:	15612216
Application Number:	12416156
Application Number:	12429580
Application Number:	12429524
Application Number:	12429539
Application Number:	12423368
Application Number:	12351697
Application Number:	12508549
Application Number:	12511955
Application Number:	12392903
Application Number:	12545063
Application Number:	12470256
Application Number:	12557845
Application Number:	12436657
Application Number:	12432661
Application Number:	14256616
Application Number:	12436644
Application Number:	12432599
Application Number:	12400488
Application Number:	12557827
Application Number:	12430503
Application Number:	12557985

Property Type	Number
Application Number:	12427602
Application Number:	12557971
Application Number:	12427609
Application Number:	12427598
Application Number:	12545625
Application Number:	12392928
Application Number:	12500667
Application Number:	12489197
Application Number:	14034367
Application Number:	12401124
Application Number:	12402332
Application Number:	12392889
Application Number:	12392913
Application Number:	14030884
Application Number:	12436550
Application Number:	13465893
Application Number:	12502304
Application Number:	12551790
Application Number:	13758792
Application Number:	14275815
Application Number:	15096305
Application Number:	12507696
Application Number:	12508457
Application Number:	12507671
Application Number:	12507952
Application Number:	12508552
Application Number:	12390506
Application Number:	13784850
Application Number:	14994266
Application Number:	15887157
Application Number:	12428563
Application Number:	12506383
Application Number:	12506391
Application Number:	13677770
Application Number:	12465711
Application Number:	12465717
Application Number:	12540324
Application Number:	14199329

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Property Type	Number
Application Number:	15852586
Application Number:	12546516
Application Number:	12426097
Application Number:	13432821
Application Number:	12478661
Application Number:	13685181
Application Number:	12547382
Application Number:	12541098
Application Number:	13648274
Application Number:	12551209
Application Number:	12984275
Application Number:	12550119
Application Number:	12550132
Application Number:	12479665
Application Number:	12423374
Application Number:	14752787
Application Number:	12405607
Application Number:	12481554
Application Number:	12479565
Application Number:	13742944
Application Number:	13742927
Application Number:	14805870
Application Number:	12415518
Application Number:	13728489
Application Number:	13728674
Application Number:	12415523
Application Number:	12479584
Application Number:	12463984
Application Number:	13855421
Application Number:	14095252
Application Number:	12415027
Application Number:	13941853
Application Number:	14293376
Application Number:	14885515
Application Number:	15961575
Application Number:	12426139
Application Number:	14171323
Application Number:	12426141

Property Type	Number
Application Number:	13547194
Application Number:	12463982
Application Number:	12463979
Application Number:	13584277
Application Number:	12433696
Application Number:	12463977
Application Number:	12433700
Application Number:	14192073
Application Number:	15350721
Application Number:	15817568
Application Number:	16180193
Application Number:	12433706
Application Number:	12464384
Application Number:	12486446
Application Number:	12464387
Application Number:	12486451
Application Number:	12496992
Application Number:	14996246
Application Number:	12415060
Application Number:	12487054
Application Number:	12551550
Application Number:	14281899
Application Number:	12434414
Application Number:	12416160
Application Number:	12411405
Application Number:	13738948
Application Number:	15707572
Application Number:	12358258
Application Number:	13275299
Application Number:	14037403
Application Number:	14855386
Application Number:	12534393
Application Number:	13771523
Application Number:	12506079
Application Number:	13654130
Application Number:	12408075
Application Number:	12502132
Application Number:	12502124

Property Type	Number
Application Number:	13598278
Application Number:	15428804
Application Number:	12578321
Application Number:	12578295
Application Number:	12578336
Application Number:	12582301
Application Number:	12648124
Application Number:	14021940
Application Number:	12649659
Application Number:	13410526
Application Number:	12605744
Application Number:	12606771
Application Number:	15600583
Application Number:	12997862
Application Number:	12643868
Application Number:	12624833
Application Number:	12713220
Application Number:	12644658
Application Number:	12648529
Application Number:	12648092
Application Number:	12621424
Application Number:	13747309
Application Number:	12996010
Application Number:	13923250
Application Number:	12732012
Application Number:	13887361
Application Number:	12996972
Application Number:	12635319
Application Number:	12642871
Application Number:	14294146
Application Number:	12635147
Application Number:	15049585
Application Number:	12578270
Application Number:	12577378
Application Number:	13519309
Application Number:	14987077
Application Number:	13702267
Application Number:	13702547

Property Type	Number
Application Number:	12685114
Application Number:	13751811
Application Number:	13058831
Application Number:	12625962
Application Number:	12626017
Application Number:	12620477
Application Number:	12638224
Application Number:	12577909
Application Number:	13785861
Application Number:	13145291
Application Number:	12642355
Application Number:	12579718
Application Number:	12580940
Application Number:	12618670
Application Number:	14047544
Application Number:	12611083
Application Number:	14644957
Application Number:	12724660
Application Number:	13479676
Application Number:	13919705
Application Number:	14851226
Application Number:	12641153
Application Number:	12714011
Application Number:	12536411
Application Number:	12714078
Application Number:	12999250
Application Number:	14073449
Application Number:	12997503
Application Number:	12715373
Application Number:	12719797
Application Number:	14094623
Application Number:	12716084
Application Number:	12640705
Application Number:	12720858
Application Number:	12715868
Application Number:	12719086
Application Number:	12719100
Application Number:	13787046

Property Type	Number
Application Number:	13382498
Application Number:	13148167
Application Number:	15469687
Application Number:	12717034
Application Number:	15112660
Application Number:	16137725
Application Number:	12714060
Application Number:	12999963
Application Number:	12999100
Application Number:	12720221
Application Number:	13572377
Application Number:	12724023
Application Number:	13058829
Application Number:	12999835
Application Number:	13002263
Application Number:	13974972
Application Number:	12719651
Application Number:	12881727
Application Number:	13202356
Application Number:	12997859
Application Number:	13121175
Application Number:	13466868
Application Number:	12637780
Application Number:	13498071
Application Number:	13002272
Application Number:	13413490
Application Number:	12720755
Application Number:	14253451
Application Number:	13384174
Application Number:	14497574
Application Number:	13202565
Application Number:	13126448
Application Number:	13131111
Application Number:	13729508
Application Number:	12995440
Application Number:	14043836
Application Number:	12993167
Application Number:	15991896

Property Type	Number
Application Number:	13260120
Application Number:	14208175
Application Number:	12999182
Application Number:	13202816
Application Number:	13128627
Application Number:	12999269
Application Number:	13003717
Application Number:	12999978
Application Number:	12999784
Application Number:	13202559
Application Number:	13125006
Application Number:	13059131
Application Number:	13322082
Application Number:	12999461
Application Number:	14303326
Application Number:	12999684
Application Number:	13126085
Application Number:	14657902
Application Number:	13063721
Application Number:	12999770
Application Number:	12999933
Application Number:	13202933
Application Number:	12999301
Application Number:	13142093
Application Number:	12999513
Application Number:	14472975
Application Number:	12999594
Application Number:	13394471
Application Number:	13322393
Application Number:	13126132
Application Number:	13546333
Application Number:	12999694
Application Number:	14055445
Application Number:	13257949
Application Number:	13059808
Application Number:	13816178
Application Number:	13260021
Application Number:	13129099

Property Type	Number
Application Number:	14035177
Application Number:	13264223
Application Number:	12895666
Application Number:	13059744
Application Number:	12999561
Application Number:	13124745
Application Number:	13056026
Application Number:	14001938
Application Number:	13144629
Application Number:	13054055
Application Number:	14084413
Application Number:	13129371
Application Number:	13129557
Application Number:	13946961
Application Number:	13641908
Application Number:	14820184
Application Number:	13378976
Application Number:	13383802
Application Number:	13517458
Application Number:	14176833
Application Number:	13383955
Application Number:	13002080
Application Number:	14176362
Application Number:	13143282
Application Number:	13002043
Application Number:	14169145
Application Number:	13148166
Application Number:	14124585
Application Number:	13501036
Application Number:	13054882
Application Number:	14574329
Application Number:	13126115
Application Number:	12999141
Application Number:	13950923
Application Number:	13500881
Application Number:	13123816
Application Number:	14048682
Application Number:	13318098

Property Type	Number
Application Number:	13531940
Application Number:	13319159
Application Number:	15080605
Application Number:	13129531
Application Number:	14172753
Application Number:	13501042
Application Number:	13260157
Application Number:	15587382
Application Number:	13318398
Application Number:	13387210
Application Number:	13499392
Application Number:	14583533
Application Number:	13128207
Application Number:	14065290
Application Number:	13058303
Application Number:	13122189
Application Number:	13121964
Application Number:	14506220
Application Number:	15156635
Application Number:	13391580
Application Number:	13604781
Application Number:	13057082
Application Number:	13499402
Application Number:	14069073
Application Number:	14054851
Application Number:	13059826
Application Number:	13061677
Application Number:	13127798
Application Number:	14632457
Application Number:	13388142
Application Number:	14074329
Application Number:	13144869
Application Number:	13580648
Application Number:	13147266
Application Number:	13500542
Application Number:	13262825
Application Number:	13139583
Application Number:	13554783

Property Type	Number
Application Number:	13974402
Application Number:	13514521
Application Number:	13130818
Application Number:	13975282
Application Number:	13139328
Application Number:	13382384
Application Number:	15071067
Application Number:	13264236
Application Number:	13264702
Application Number:	13816552
Application Number:	13144401
Application Number:	13503628
Application Number:	14332878
Application Number:	15613349
Application Number:	13263417
Application Number:	13263835
Application Number:	14797703
Application Number:	15979209
Application Number:	13980535
Application Number:	13500052
Application Number:	13380301
Application Number:	14979130
Application Number:	13133942
Application Number:	13384859
Application Number:	13145948
Application Number:	13386736
Application Number:	14259663
Application Number:	13515001
Application Number:	14973721
Application Number:	15877354
Application Number:	13142530
Application Number:	14440344
Application Number:	13940024
Application Number:	13260899
Application Number:	14538202
Application Number:	13143726
Application Number:	13497442
Application Number:	14859322

Property Type	Number
Application Number:	13443576
Application Number:	13503624
Application Number:	13461475
Application Number:	13266104
Application Number:	13517182
Application Number:	13140102
Application Number:	13260234
Application Number:	14850826
Application Number:	13139240
Application Number:	14655293
Application Number:	14913239
Application Number:	13202082
Application Number:	13391038
Application Number:	13319834
Application Number:	13389432
Application Number:	15047739
Application Number:	15815823
Application Number:	15026915
Application Number:	13381329
Application Number:	13383516
Application Number:	13375262
Application Number:	13383358
Application Number:	13390264
Application Number:	13519806
Application Number:	13519569
Application Number:	13512700
Application Number:	13255905
Application Number:	13142280
Application Number:	13521908
Application Number:	13389582
Application Number:	13650722
Application Number:	13642018
Application Number:	13390337
Application Number:	14483120
Application Number:	15854117
Application Number:	13386990
Application Number:	13377971
Application Number:	14265991

Property Type	Number
Application Number:	13391158
Application Number:	14657886
Application Number:	13377085
Application Number:	13386095
Application Number:	14480189
Application Number:	13319500
Application Number:	13554633
Application Number:	13387546
Application Number:	13264710
Application Number:	13496064
Application Number:	13642485
Application Number:	13498424
Application Number:	13320904
Application Number:	15361638
Application Number:	13321081
Application Number:	13264672
Application Number:	13383794
Application Number:	14640933
Application Number:	13703338
Application Number:	13321792
Application Number:	14046376
Application Number:	13509699
Application Number:	13579929
Application Number:	13390329
Application Number:	13578419
Application Number:	13702013
Application Number:	13262089
Application Number:	15018959
Application Number:	13636527
Application Number:	13821560
Application Number:	15633636
Application Number:	13879594
Application Number:	15469933
Application Number:	13395880
Application Number:	14572733
Application Number:	13808159
Application Number:	13946710
Application Number:	13816702

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Property Type	Number
Application Number:	13814504
Application Number:	13636523
Application Number:	13816075
Application Number:	13823291
Application Number:	13574246
Application Number:	13640360
Application Number:	13511117
Application Number:	13824105
Application Number:	14226398
Application Number:	13822221
Application Number:	13978239
Application Number:	13497529
Application Number:	13445567
Application Number:	13614279
Application Number:	13956941
Application Number:	13577859
Application Number:	13389796
Application Number:	13823305
Application Number:	13520876
Application Number:	14566138
Application Number:	13640272
Application Number:	14703730
Application Number:	13637249
Application Number:	13511651
Application Number:	13389380
Application Number:	14873172
Application Number:	13502088
Application Number:	15145920
Application Number:	13580512
Application Number:	14559563
Application Number:	13515052
Application Number:	14593326
Application Number:	13514337
Application Number:	13503781
Application Number:	13515404
Application Number:	13509321
Application Number:	13811758
Application Number:	14567875

Property Type	Number
Application Number:	13522429
Application Number:	13813588
Application Number:	13519393
Application Number:	14736365
Application Number:	13519730
Application Number:	14476648
Application Number:	13814996
Application Number:	13498909
Application Number:	15604604
Application Number:	13811280
Application Number:	13642502
Application Number:	13500907
Application Number:	14649498
Application Number:	13579018
Application Number:	13577382
Application Number:	14260835
Application Number:	14480393
Application Number:	13640797
Application Number:	14400517
Application Number:	13813591
Application Number:	13642904
Application Number:	13818485
Application Number:	13989858
Application Number:	14232797
Application Number:	14239471
Application Number:	14716194
Application Number:	13977482
Application Number:	13521440
Application Number:	13502312
Application Number:	13811220
Application Number:	13642403
Application Number:	14710307
Application Number:	13637206
Application Number:	13810324
Application Number:	13579131
Application Number:	14943947
Application Number:	13883446
Application Number:	15174405

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Property Type	Number
Application Number:	13579485
Application Number:	13882424
Application Number:	14394827
Application Number:	13521435
Application Number:	13577486
Application Number:	13497671
Application Number:	14437331
Application Number:	13950851
Application Number:	13522016
Application Number:	13761576
Application Number:	13812402
Application Number:	13738424
Application Number:	14396058
Application Number:	15836167
Application Number:	13877422
Application Number:	14687452
Application Number:	13749291
Application Number:	13634448
Application Number:	13582937
Application Number:	13825492
Application Number:	13879517
Application Number:	13512554
Application Number:	14301172
Application Number:	14654335
Application Number:	13634335
Application Number:	13878180
Application Number:	15651904
Application Number:	13884116
Application Number:	13817695
Application Number:	13520464
Application Number:	14686608
Application Number:	13640307
Application Number:	13761512
Application Number:	14297990
Application Number:	15462994
Application Number:	13700417
Application Number:	13576471
Application Number:	13521578

Property Type	Number
Application Number:	13880194
Application Number:	13879544
Application Number:	13809543
Application Number:	13809049
Application Number:	14857316
Application Number:	13817533
Application Number:	15063614
Application Number:	13884256
Application Number:	13812400
Application Number:	14657716
Application Number:	13985523
Application Number:	13879751
Application Number:	14234990
Application Number:	14729368
Application Number:	13583706
Application Number:	14411025
Application Number:	13640283
Application Number:	13878531
Application Number:	13879700
Application Number:	13819776
Application Number:	15152159
Application Number:	13789010
Application Number:	13982607
Application Number:	13430090
Application Number:	13982344
Application Number:	14764696
Application Number:	13811733
Application Number:	14491717
Application Number:	13885306
Application Number:	13810279
Application Number:	13879723
Application Number:	13812967
Application Number:	13640046
Application Number:	14724713
Application Number:	13634502
Application Number:	13989798
Application Number:	15450020
Application Number:	13811643

Property Type	Number
Application Number:	13819889
Application Number:	13634013
Application Number:	13879708
Application Number:	13997890
Application Number:	14541588
Application Number:	13823361
Application Number:	13582912
Application Number:	14725874
Application Number:	14009279
Application Number:	13995411
Application Number:	13827155
Application Number:	13817008
Application Number:	14006801
Application Number:	14005520
Application Number:	14123231
Application Number:	14360657
Application Number:	13640469
Application Number:	14470733
Application Number:	13635395
Application Number:	14005232
Application Number:	13578025
Application Number:	14488453
Application Number:	13876473
Application Number:	13940017
Application Number:	13811384
Application Number:	14873169
Application Number:	14770756
Application Number:	14768532
Application Number:	15289714
Application Number:	14233848
Application Number:	13830068
Application Number:	13813715
Application Number:	13700683
Application Number:	14919296
Application Number:	14771400
Application Number:	14363049
Application Number:	13877413
Application Number:	13816717

Property Type	Number
Application Number:	15027170
Application Number:	13578518
Application Number:	14763739
Application Number:	13978655
Application Number:	13816988
Application Number:	13877377
Application Number:	14827476
Application Number:	13879713
Application Number:	14001870
Application Number:	13877216
Application Number:	14407072
Application Number:	15336808
Application Number:	14411917
Application Number:	13816134
Application Number:	14796259
Application Number:	13819745
Application Number:	13982620
Application Number:	13876160
Application Number:	14992042
Application Number:	15477229
Application Number:	13995339
Application Number:	14009750
Application Number:	14418871
Application Number:	14112037
Application Number:	14112036
Application Number:	14769778
Application Number:	14785323
Application Number:	13701445
Application Number:	13980033
Application Number:	13642775
Application Number:	13810496
Application Number:	15361622
Application Number:	13879941
Application Number:	13643041
Application Number:	13816102
Application Number:	15002695
Application Number:	14909419
Application Number:	14888386

Property Type	Number
Application Number:	13816419
Application Number:	13823104
Application Number:	14901403
Application Number:	13701197
Application Number:	14995788
Application Number:	13810818
Application Number:	14006071
Application Number:	14118006
Application Number:	13990309
Application Number:	14820431
Application Number:	14112275
Application Number:	13982807
Application Number:	15268226
Application Number:	13988015
Application Number:	13876163
Application Number:	13702907
Application Number:	14110119
Application Number:	13991382
Application Number:	14851245
Application Number:	15708517
Application Number:	15100616
Application Number:	13881416
Application Number:	13881540
Application Number:	13878538
Application Number:	14764302
Application Number:	15394505
Application Number:	14910874
Application Number:	14129864
Application Number:	14004902
Application Number:	14356391
Application Number:	14915217
Application Number:	13878126
Application Number:	14739443
Application Number:	14766971
Application Number:	14363792
Application Number:	15474577
Application Number:	13885996
Application Number:	13885160

Property Type	Number
Application Number:	14426157
Application Number:	13994882
Application Number:	14009095
Application Number:	14031056
Application Number:	14769818
Application Number:	14350038
Application Number:	15463862
Application Number:	14406147
Application Number:	14414452
Application Number:	13977670
Application Number:	13876766
Application Number:	13978877
Application Number:	14114524
Application Number:	13988417
Application Number:	14916743
Application Number:	14400557
Application Number:	14110132
Application Number:	14785477
Application Number:	14906540
Application Number:	13980041
Application Number:	14840612
Application Number:	14371180
Application Number:	15401114
Application Number:	14342333
Application Number:	14769806
Application Number:	14234380
Application Number:	14238457
Application Number:	14783309
Application Number:	15863003
Application Number:	14390383
Application Number:	14763161
Application Number:	14894999
Application Number:	14356150
Application Number:	14351508
Application Number:	13850671
Application Number:	14237084
Application Number:	14910640
Application Number:	14785582

Property Type	Number
Application Number:	14114732
Application Number:	14118626
Application Number:	14124569
Application Number:	14358146
Application Number:	14344795
Application Number:	14351829
Application Number:	14348143
Application Number:	15031687
Application Number:	14009101
Application Number:	14575809
Application Number:	14468238
Application Number:	14373026
Application Number:	15402389
Application Number:	14769753
Application Number:	14892525
Application Number:	14238470
Application Number:	15104125
Application Number:	14119171
Application Number:	14728645
Application Number:	14457128
Application Number:	14003770
Application Number:	15031701
Application Number:	15300272
Application Number:	14364076
Application Number:	14376816
Application Number:	14127969
Application Number:	14796238
Application Number:	14898369
Application Number:	14235958
Application Number:	14238542
Application Number:	14901676
Application Number:	14783472
Application Number:	14379630
Application Number:	14352655
Application Number:	15017982
Application Number:	14350771
Application Number:	14386300
Application Number:	14306406

Property Type	Number
Application Number:	14647079
Application Number:	14376133
Application Number:	14372008
Application Number:	15035472
Application Number:	14239970
Application Number:	14414382
Application Number:	15024888
Application Number:	15107607
Application Number:	14899123
Application Number:	15123985
Application Number:	14907285
Application Number:	14380698
Application Number:	15197767
Application Number:	14241052
Application Number:	14379492
Application Number:	14594253
Application Number:	15032045
Application Number:	14906752
Application Number:	15125571
Application Number:	14373897
Application Number:	14380372
Application Number:	14384677
Application Number:	15867211
Application Number:	14347894
Application Number:	14887902
Application Number:	15633235
Application Number:	14359247
Application Number:	14526434
Application Number:	14351070
Application Number:	14649505
Application Number:	15128895
Application Number:	14758404
Application Number:	15495126
Application Number:	14118992
Application Number:	15110699
Application Number:	14337748
Application Number:	14380371
Application Number:	14457960

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Property Type	Number
Application Number:	15252250
Application Number:	14445991
Application Number:	15299483
Application Number:	14450203
Application Number:	14128201
Application Number:	14812664
Application Number:	14373625
Application Number:	16198482
Application Number:	15125576
Application Number:	14370436
Application Number:	14376125
Application Number:	14371730
Application Number:	15495517
Application Number:	14353238
Application Number:	14362583
Application Number:	15120446
Application Number:	14651091
Application Number:	15612452
Application Number:	15483740
Application Number:	14360288
Application Number:	14364017
Application Number:	15117332
Application Number:	14372407
Application Number:	14390368
Application Number:	14372439
Application Number:	15306004
Application Number:	15306021
Application Number:	14548264
Application Number:	14761599
Application Number:	14370637
Application Number:	14515425
Application Number:	15494109
Application Number:	14603277
Application Number:	14413414
Application Number:	14338217
Application Number:	15112131
Application Number:	15120751
Application Number:	14647075

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Property Type	Number
Application Number:	15424065
Application Number:	14373829
Application Number:	15470073
Application Number:	14375296
Application Number:	14442093
Application Number:	14758812
Application Number:	15125523
Application Number:	14457479
Application Number:	14295286
Application Number:	14488125
Application Number:	15712475
Application Number:	14291124
Application Number:	14666058
Application Number:	14324074
Application Number:	14456965
Application Number:	14316527
Application Number:	14430891
Application Number:	14380908
Application Number:	14492186
Application Number:	14760951
Application Number:	14383720
Application Number:	14873401
Application Number:	15107927
Application Number:	15109833
Application Number:	14421101
Application Number:	15123144
Application Number:	14482958
Application Number:	14475360
Application Number:	15508416
Application Number:	15309393
Application Number:	14391640
Application Number:	15436078
Application Number:	14420858
Application Number:	15729126
Application Number:	14329795
Application Number:	14334465
Application Number:	15106851
Application Number:	14479817

Property Type	Number
Application Number:	14649894
Application Number:	14282055
Application Number:	14297450
Application Number:	14293363
Application Number:	14304653
Application Number:	16111577
Application Number:	14308262
Application Number:	14413418
Application Number:	14573259
Application Number:	14405084
Application Number:	14413223
Application Number:	14311807
Application Number:	15700907
Application Number:	14630644
Application Number:	14290883
Application Number:	14480007
Application Number:	16101285
Application Number:	14523458
Application Number:	14567278
Application Number:	14596078
Application Number:	14496092
Application Number:	14479909
Application Number:	14455312
Application Number:	14934774
Application Number:	14741328
Application Number:	14325280
Application Number:	14558447
Application Number:	14494319
Application Number:	14458577
Application Number:	15286222
Application Number:	14454326
Application Number:	14665472
Application Number:	14479945
Application Number:	14665726
Application Number:	14761935
Application Number:	14614763
Application Number:	14438223
Application Number:	14431034

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Property Type	Number
Application Number:	14437831
Application Number:	14651191
Application Number:	14858979
Application Number:	14858970
Application Number:	14859096
Application Number:	14859108
Application Number:	14858947
Application Number:	14761253
Application Number:	14787322
Application Number:	15581758
Application Number:	12665704
Application Number:	14412000
Application Number:	14410524
Application Number:	14403124
Application Number:	14959000
Application Number:	14761544
Application Number:	15032331
Application Number:	15111231
Application Number:	13580945
Application Number:	13884603
Application Number:	14410529
Application Number:	15030037
Application Number:	15117395
Application Number:	15555893
Application Number:	15308018
Application Number:	13321316
Application Number:	13126109
Application Number:	13881148
Application Number:	13380767
Application Number:	13636027
Application Number:	14223017
Application Number:	14778436
Application Number:	14898442
Application Number:	14443867
Application Number:	14761268
Application Number:	13837904
Application Number:	14982431
Application Number:	14777282

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Property Type	Number
Application Number:	14780492
Application Number:	14877635
Application Number:	14122559
Application Number:	14762691
Application Number:	13576000
Application Number:	15287367
Application Number:	13018477
Application Number:	12609011
Application Number:	12634251
Application Number:	12171812
Application Number:	12540724
Application Number:	12540843
Application Number:	12707400
Application Number:	12507938
Application Number:	12485692
Application Number:	12727961
Application Number:	12372556
Application Number:	13615264
Application Number:	14247098
Application Number:	12487781
Application Number:	12999029
Application Number:	12999266
Application Number:	12997831
Application Number:	12836843
Application Number:	12727049
Application Number:	12785040
Application Number:	12827906
Application Number:	12847571
Application Number:	13795816
Application Number:	13274001
Application Number:	15006818
Application Number:	15833579
Application Number:	13835486
Application Number:	12200737
Application Number:	13185270
Application Number:	12198842
Application Number:	12545678
Application Number:	13758115

Property Type	Number
Application Number:	12606880
Application Number:	12498228
Application Number:	14322695
Application Number:	12498265
Application Number:	12493800
Application Number:	12472168
Application Number:	12498204
Application Number:	13485241
Application Number:	12620602
Application Number:	13279945
Application Number:	12432967
Application Number:	12498257
Application Number:	12430447
Application Number:	12606852
Application Number:	12482997
Application Number:	12625314
Application Number:	14023926
Application Number:	14225368
Application Number:	12633575
Application Number:	14173422
Application Number:	12695288
Application Number:	12650031
Application Number:	12696652
Application Number:	13033547
Application Number:	13262886
Application Number:	13979589
Application Number:	14357770
Application Number:	14446155
Application Number:	14335580
Application Number:	15023694
Application Number:	14394679
Application Number:	13977893
Application Number:	14319740
Application Number:	12754916
Application Number:	12628721
Application Number:	12632437
Application Number:	12633437
Application Number:	12756612

Property Type	Number
Application Number:	13755728
Application Number:	14142209
Application Number:	13377493
Application Number:	13376102
Application Number:	13496705
Application Number:	13497477
Application Number:	14150110
Application Number:	13503815
Application Number:	13513068
Application Number:	14134899
Application Number:	14364574
Application Number:	13991605
Application Number:	15141629
Application Number:	13825661
Application Number:	13884721
Application Number:	14413635
Application Number:	13879804
Application Number:	14769808
Application Number:	14455780
Application Number:	14455699
Application Number:	14309554
Application Number:	14455387
Application Number:	14902480
Application Number:	14464420
Application Number:	15658027
Application Number:	14539790
Application Number:	14910809
Application Number:	14547311
Application Number:	14681849
Application Number:	13997036
Application Number:	13504841
Application Number:	13458899
Application Number:	14098184
Application Number:	14629408
Application Number:	15887561
Application Number:	13324587
Application Number:	13509387
Application Number:	13824761

Property Type	Number
Application Number:	15874433
Application Number:	14810231
Application Number:	12791816
Application Number:	13439251
Application Number:	12951803
Application Number:	13133143
Application Number:	14255715
Application Number:	13133936
Application Number:	13141242
Application Number:	13376440
Application Number:	14288266
Application Number:	13376502
Application Number:	14208877
Application Number:	12950262
Application Number:	14127640
Application Number:	13382888
Application Number:	13481656
Application Number:	13505059
Application Number:	14251396
Application Number:	13503349
Application Number:	13818587
Application Number:	13821391
Application Number:	15021917
Application Number:	11886020
Application Number:	12708410
Application Number:	12999434
Application Number:	13590033
Application Number:	12196100
Application Number:	12195943
Application Number:	12182882
Application Number:	12196086
Application Number:	12196002
Application Number:	12175128
Application Number:	12191900
Application Number:	10586148
Application Number:	12439441
Application Number:	12524254
Application Number:	12523917

Property Type	Number
Application Number:	13860674
Application Number:	12089855
Application Number:	12712760
Application Number:	13710346
Application Number:	13710330
Application Number:	12647116
Application Number:	12938193
Application Number:	14228606
Application Number:	11665337
Application Number:	12161128
Application Number:	12196871
Application Number:	12209851
Application Number:	12857283
Application Number:	12836733
Application Number:	12767924
Application Number:	12233339
Application Number:	12197961
Application Number:	13089206
Application Number:	12238306
Application Number:	12234529
Application Number:	14622092
Application Number:	12198744
Application Number:	13365115
Application Number:	12211006
Application Number:	12234560
Application Number:	12985581
Application Number:	12197754
Application Number:	12196092
Application Number:	12194361
Application Number:	12199733
Application Number:	12198815
Application Number:	13210274
Application Number:	12198835
Application Number:	12192024
Application Number:	12195347
Application Number:	12234491
Application Number:	13030065
Application Number:	12196194

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Property Type	Number
Application Number:	12200447
Application Number:	13346094
Application Number:	12197994
Application Number:	12195330
Application Number:	12199358
Application Number:	13404517
Application Number:	12198790
Application Number:	12197568
Application Number:	12405764
Application Number:	13523019
Application Number:	12665435
Application Number:	12365404
Application Number:	12665601
Application Number:	12665308
Application Number:	12665635
Application Number:	12354463
Application Number:	13885390
Application Number:	14778366
Application Number:	14758421
Application Number:	14758210
Application Number:	15507552
Application Number:	15502640
Application Number:	12770466
Application Number:	15117998
Application Number:	12516493
Application Number:	12516497
Application Number:	12516500
Application Number:	12516705
Application Number:	12516643
Application Number:	12516715
Application Number:	12521244
Application Number:	12153661
Application Number:	13404667
Application Number:	12153662
Application Number:	13414794
Application Number:	12529217
Application Number:	13739638
Application Number:	12529229

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Property Type	Number
Application Number:	12529231
Application Number:	12545420
Application Number:	12995751
Application Number:	13955846
Application Number:	13260109
Application Number:	13147594
Application Number:	15602045
Application Number:	12551093
Application Number:	12568584
Application Number:	13853682
Application Number:	12567684
Application Number:	14024015
Application Number:	14311443
Application Number:	12569480
Application Number:	13837956
Application Number:	13394764
Application Number:	13257791
Application Number:	14602378
Application Number:	13322335
Application Number:	13502011
Application Number:	13978700
Application Number:	13290146
Application Number:	14803074
Application Number:	15197458
Application Number:	13980573
Application Number:	12440150
Application Number:	14692318
Application Number:	12515248
Application Number:	12445261
Application Number:	12520966
Application Number:	13269974
Application Number:	12666222
Application Number:	14221481
Application Number:	15495741
Application Number:	12895568
Application Number:	13466554
Application Number:	13548226
Application Number:	14110743

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Property Type	Number
Application Number:	14115085
Application Number:	15189297
Application Number:	12727062
Application Number:	12813724
Application Number:	13256635
Application Number:	13265229
Application Number:	12510040
Application Number:	14058147
Application Number:	12368516
Application Number:	12420714
Application Number:	12422683
Application Number:	12485828
Application Number:	12422138
Application Number:	12396039
Application Number:	12479438
Application Number:	13653215
Application Number:	12511424
Application Number:	14166802
Application Number:	12490293
Application Number:	12649013
Application Number:	12512635
Application Number:	12512792
Application Number:	12389909
Application Number:	12421949
Application Number:	12418681
Application Number:	12479574
Application Number:	12511814
Application Number:	12422677
Application Number:	12485814
Application Number:	13592261
Application Number:	12365800
Application Number:	12253825
Application Number:	12430788
Application Number:	12420724
Application Number:	12365812
Application Number:	12723578
Application Number:	13257305
Application Number:	12626077

Property Type	Number
Application Number:	13920814
Application Number:	13121346
Application Number:	12996772
Application Number:	13172741
Application Number:	14322883
Application Number:	13819267
Application Number:	13297101
Application Number:	14345211
Application Number:	13661017
Application Number:	13882687
Application Number:	14349313
Application Number:	13981080
Application Number:	13881147
Application Number:	14342191
Application Number:	13814918
Application Number:	14110708
Application Number:	14364656
Application Number:	15038974
Application Number:	14353266
Application Number:	14917621
Application Number:	14436047
Application Number:	13148208
Application Number:	13492011
Application Number:	12474550
Application Number:	12628064
Application Number:	13915195
Application Number:	12720952
Application Number:	13209073
Application Number:	14856146
Application Number:	12466759
Application Number:	13407456
Application Number:	12993333
Application Number:	13101087
Application Number:	13505715
Application Number:	13146308
Application Number:	14427037
Application Number:	13814710
Application Number:	14779172

Property Type	Number
Application Number:	12665431
Application Number:	12845360
Application Number:	15052345
Application Number:	13082102
Application Number:	13812058
Application Number:	13812089
Application Number:	14122229
Application Number:	15054162
Application Number:	14115093
Application Number:	15422456
Application Number:	15027644
Application Number:	14492748
Application Number:	14492811
Application Number:	13808910
Application Number:	13579468
Application Number:	12634260
Application Number:	12627737
Application Number:	13375135
Application Number:	12726945
Application Number:	13381977
Application Number:	13030899
Application Number:	13320748
Application Number:	13320368
Application Number:	13266128
Application Number:	13389562
Application Number:	14054370
Application Number:	12201448
Application Number:	13224238
Application Number:	12199685
Application Number:	13488177
Application Number:	12202000
Application Number:	13291935
Application Number:	12199748
Application Number:	12201990
Application Number:	12713401
Application Number:	12707498
Application Number:	12683238
Application Number:	13629975

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Property Type	Number
Application Number:	12713443
Application Number:	12606824
Application Number:	12468329
Application Number:	13554182
Application Number:	12550547
Application Number:	13151080
Application Number:	12548959
Application Number:	13246593
Application Number:	12500946
Application Number:	13407488
Application Number:	12549012
Application Number:	14054676
Application Number:	12650058
Application Number:	12650175
Application Number:	14559558
Application Number:	12650225
Application Number:	14027049
Application Number:	12540875
Application Number:	12645219
Application Number:	12500904
Application Number:	12762183
Application Number:	14260088
Application Number:	12579128
Application Number:	12642556
Application Number:	12468300
Application Number:	13559640
Application Number:	12507718
Application Number:	14054679
Application Number:	12648110
Application Number:	14813687
Application Number:	12620761
Application Number:	13495266
Application Number:	12633596
Application Number:	12604290
Application Number:	13867906
Application Number:	12665322
Application Number:	12665636
Application Number:	12262644

Property Type	Number
Application Number:	12629636
Application Number:	12770281
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Application Number:	12487313
Application Number:	13652269
Application Number:	12645709
Application Number:	12726960
Application Number:	12521114

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ATTORNEY DOCKET NUMBER:	061718/524082
NAME OF SUBMITTER:	MICHELE GLESSNER
SIGNATURE:	/Michele Glessner/
DATE SIGNED:	01/29/2019

Total Attachments: 131

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PATENT SECURITY AGREEMENT

This PATENT SECURITY AGREEMENT (this "Patent Security Agreement") is made as of this 28 day of December, 2018, by and among Grantors listed on the signature pages hereof (collectively, jointly and severally, "Grantors" and each individually "Grantor"), and CRESTLINE DIRECT FINANCE, L.P., in its capacity as Collateral Agent for the Secured Parties (in such capacity, together with its successors, the "Collateral Agent").

W I T N E S S E T H:

WHEREAS, pursuant to that certain Credit and Guaranty Agreement, dated as of the date hereof (as amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement"), by and among INVENTION HOLDING COMPANY, LLC, a Delaware limited liability company, ALLIED INVENTORS, LLC, a Delaware limited liability company ("Borrower" and CERTAIN SUBSIDIARIES OF BORROWER, as Guarantors, the Lenders party thereto from time to time (collectively, the "Lenders"), the Collateral Agent and CRESTLINE DIRECT FINANCE, L.P., as Administrative Agent and Sole Lead Arranger, the Secured Parties have agreed to make certain financial accommodations available to Company from time to time pursuant to the terms and conditions thereof;

WHEREAS, the Secured Parties are willing to make the financial accommodations to Company as provided for in the Credit Agreement, but only upon the condition, among others, that Grantors shall have executed and delivered to the Collateral Agent, for the benefit of the Secured Parties, that certain Pledge and Security Agreement dated as of December 28, 2018, by and among the Grantors, the other Grantors party thereto and the Collateral Agent (as amended, restated, supplemented or otherwise modified from time to time, the "Security Agreement"); and

WHEREAS, pursuant to the Security Agreement, Grantors are required to execute and deliver to the Collateral Agent, for the benefit of the Secured Parties, this Patent Security Agreement.

NOW, THEREFORE, in consideration of the premises and mutual covenants herein contained and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each Grantor hereby agrees as follows:

1. DEFINED TERMS. All capitalized terms used but not otherwise defined herein have the meanings given to them in the Security Agreement or, if not defined therein, in the Credit Agreement.

2. GRANT OF SECURITY INTEREST IN PATENT COLLATERAL. Each Grantor hereby grants to the Collateral Agent, for the benefit of the Secured Parties, a continuing First Priority security interest in all of such Grantor's right, title and interest in, to and under the following, whether presently existing or hereafter created or acquired (collectively, the "Patent Collateral"):

(a) all of its Patents, including those referred to on Schedule I hereto, and Patent Licenses, including those referred to on Schedule II hereto;

(b) all reissues, continuations or extensions of the foregoing;

(c) all products and Proceeds of the foregoing, including any claim by such Grantor against third parties for past, present or future (i) infringement or dilution of any Patent or Patent License or (ii) injury to the goodwill associated with any Patent or Patent License.

3. SECURITY FOR OBLIGATIONS. This Patent Security Agreement and the Lien created hereby secures the payment and performance of all the Secured Obligations, whether now existing or arising hereafter. Without limiting the generality of the foregoing, this Patent Security Agreement secures the payment of all amounts which constitute part of the Obligations and would be owed by Grantors, or any of them, to the Collateral Agent, the other Secured Parties or any of them, whether or not they are unenforceable or not allowable due to the filing of a petition in bankruptcy with respect to any Grantor.

4. SECURITY AGREEMENT. The security interests granted pursuant to this Patent Security Agreement are granted in conjunction with the security interests granted to the Collateral Agent, for the benefit of the Secured Parties, pursuant to the Security Agreement. Each Grantor hereby acknowledges and affirms that the rights and remedies of the Collateral Agent with respect to the security interest in the Patent Collateral made and granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein.

5. AUTHORIZATION TO SUPPLEMENT. If any Grantor shall obtain rights to any new Patents or Patent Licenses, the provisions of this Patent Security Agreement shall automatically apply thereto. Grantors hereby authorize the Collateral Agent unilaterally to modify this Agreement by amending Schedule I or Schedule II, as applicable, to include any such new rights of Grantors. Notwithstanding the foregoing, no failure to so modify this Patent Security Agreement or amend Schedule I or Schedule II, as the case may be, shall in any way affect, invalidate or detract from the Collateral Agent's continuing security interest in all Patent Collateral, whether or not listed on Schedule I or Schedule II, as applicable.

6. COUNTERPARTS. This Patent Security Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but all such separate counterparts shall together constitute but one and the same instrument. In proving this Patent Security Agreement in any judicial proceedings, it shall not be necessary to produce or account for more than one such counterpart signed by the party against whom such enforcement is sought. Any signatures delivered by a party by facsimile or other electronic method of transmission shall be deemed an original signature hereto.

7. CONSTRUCTION. Unless the context of this Patent Security Agreement clearly requires otherwise, references to the plural include the singular, references to the singular include the plural, the terms "includes" and "including" are not limiting, and the term "or" has, except where otherwise indicated, the inclusive meaning represented by the phrase "and/or." The words "hereof", "herein", "hereby", "hereunder" and similar terms in this Patent Security Agreement refer to this Patent Security Agreement as a whole and not to any particular provision of this Patent Security Agreement. Section, Schedule, and Exhibit references herein are to this Patent Security Agreement unless otherwise specified.

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, each Grantor has caused this Patent Security Agreement to be executed and delivered by its duly authorized officer as of the date first set forth above.


[signature on following page]

Signature Page to Patent Security Agreement

EMPIRE TECHNOLOGY DEVELOPMENT LLC

By: Allied Inventors, LLC its sole member

By: Allied Inventors Management, LLC, its
Manager

By: 
Name: Thomas C. Kang
Title: CEO

Signature Page to Patent Security Agreement]

PATENT
REEL: 048373 FRAME: 0298

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SCHEDULE I
PATENTS

Attached.

SCHEDULE I TO PATENT SECURITY AGREEMENT

PATENT
REEL: 048373 FRAME: 0299

COBB_029390

Grantor	Country	Patent	Application Number	Application Filing Date	Status
Empire Technology Development LLC	United States of America	8978322	12/886370	Sep 20, 2010	Issued
Empire Technology Development LLC	Australia	2013231094	2013231094	Feb 25, 2010	Issued
Empire Technology Development LLC	Australia	2010200700	2010200700	Feb 25, 2010	Issued
Empire Technology Development LLC	Australia	2010200965	2010200965	Mar 12, 2010	Issued
Empire Technology Development LLC	United States of America	8955546	12/86403	Sep 20, 2010	Issued
Empire Technology Development LLC	United States of America	9228025	13/695276	Oct 29, 2012	Issued
Empire Technology Development LLC	United States of America	9267873	13/376544	Dec 6, 2011	Issued
Empire Technology Development LLC	United States of America	8946958	13/321784	Nov 21, 2011	Issued
Empire Technology Development LLC	United States of America	8920902	13/256215	Sep 12, 2011	Issued
Empire Technology Development LLC	Australia	2011370979	2011370979	Jun 14, 2011	Issued
Empire Technology Development LLC	China	ZL201180069549.0	201180069549.0	Mar 24, 2011	Issued
Empire Technology Development LLC	Japan	5749852	2014-501051	Mar 24, 2011	Issued
Empire Technology Development LLC	United States of America	9742842	13/511134	May 21, 2012	Issued
Empire Technology Development LLC	Republic of Korea	10-1589801	10-2013-7031995	Sep 20, 2011	Issued
Empire Technology Development LLC	China	ZL201180073489.X	201180073489.X	Sep 20, 2011	Issued
Empire Technology Development LLC	United States of America	15/681,281		Aug 18, 2017	Published
Empire Technology Development LLC	United States of America	10059032	13/982251	Jul 26, 2013	Issued
Empire Technology Development LLC	United States of America	8904851	13/696689	Nov 7, 2012	Issued
Empire Technology Development LLC	China	ZL201180075390.3	201180075390.3	Dec 19, 2011	Issued
Empire Technology Development LLC	Japan	5965494	2014-545874	Dec 19, 2011	Issued
Empire Technology Development LLC	United States of America	9039803	13/699193	Nov 20, 2012	Issued
Empire Technology Development LLC	Australia	2012372793	2012372793	Mar 7, 2012	Issued
Empire Technology Development LLC	China	ZL201280072994.7	201280072994.7	Mar 7, 2012	Issued
Empire Technology Development LLC	United States of America	8987428	13/698776	Nov 19, 2012	Issued
Empire Technology Development LLC	United States of America	9790248	14/626591	Feb 19, 2015	Issued
Empire Technology Development LLC	United States of America	9006369	13/814866	Feb 7, 2013	Issued
Empire Technology Development LLC	United States of America	9157359	13/976440	Jun 26, 2013	Issued
Empire Technology Development LLC	United States of America	8920932	13/814844	Feb 7, 2013	Issued
Empire Technology Development LLC	China	ZL201280075898.8	201280075898.8	Jul 19, 2012	Issued
Empire Technology Development LLC	Germany	112012006712	112012006712.6	Jul 19, 2012	Issued
Empire Technology Development LLC	United States of America	13/988,010		May 16, 2013	Published
Empire Technology Development LLC	United States of America	9725867	14/375115	Sep 24, 2014	Issued
Empire Technology Development LLC	United States of America	9370321	13/993908	Jun 13, 2013	Issued
Empire Technology Development LLC	United States of America	9111154	13/811548	Jan 22, 2013	Issued
Empire Technology Development LLC	United States of America	8911858	13/879289	Apr 12, 2013	Issued

Empire Technology Development LLC	United States of America	9221960 14/548223	Nov 19, 2014	Issued
Empire Technology Development LLC	China	ZL201280076688.0 201280076688.0	Oct 31, 2012	Issued
Empire Technology Development LLC	United States of America	9745699 14/440923	May 6, 2015	Issued
Empire Technology Development LLC	United States of America	9907540 14/362907	Jun 4, 2014	Issued
Empire Technology Development LLC	United States of America	9417122 13/879800	Apr 16, 2013	Issued
Empire Technology Development LLC	United States of America	9057677 13/825052	Mar 19, 2013	Issued
Empire Technology Development LLC	United States of America	9269034 13/816574	Feb 12, 2013	Issued
Empire Technology Development LLC	United States of America	14/009,763	Oct 3, 2013	Published
Empire Technology Development LLC	China	201380075580.4	Feb 15, 2013	Allowed
Empire Technology Development LLC	United States of America	9834522 14/768217	Aug 15, 2015	Issued
Empire Technology Development LLC	United States of America	9890130 14/768218	Aug 15, 2015	Issued
Empire Technology Development LLC	United States of America	15/584,363	May 2, 2017	Marked for Impairing
Empire Technology Development LLC	United States of America	15/584,518	May 2, 2017	Marked for Impairing
Empire Technology Development LLC	United States of America	10040007 14/648460	May 29, 2015	Issued
Empire Technology Development LLC	United States of America	14/770,580	Aug 26, 2015	Marked for Impairing
Empire Technology Development LLC	United States of America	9663605 13/825858	Mar 25, 2013	Issued
Empire Technology Development LLC	United States of America	14/785,566	Oct 19, 2015	Marked for Impairing
Empire Technology Development LLC	European Patent Office	13882133.5	Apr 18, 2013	Marked for Impairing
Empire Technology Development LLC	United States of America	9918466 14/760740	Jul 14, 2015	Issued
Empire Technology Development LLC	United States of America	9893287 14/651841	Jun 12, 2015	Issued
Empire Technology Development LLC	United States of America	9493275 13/876016	Mar 26, 2013	Issued
Empire Technology Development LLC	European Patent Office	13886810.4	Jun 13, 2013	Allowed
Empire Technology Development LLC	United States of America	9868683 14/898420	Dec 14, 2015	Issued
Empire Technology Development LLC	China	ZL 201380078517.6 201380078517.6	Jun 13, 2013	Issued
Empire Technology Development LLC	Republic of Korea	10-1806862 10-2016-7000891	Jun 13, 2013	Issued
Empire Technology Development LLC	India	7872/CHENP/2015	Jun 13, 2013	Published
Empire Technology Development LLC	United States of America	15/031,710	Apr 22, 2016	Allowed
Empire Technology Development LLC	United States of America	9428666 14/778977	Sep 21, 2015	Issued
Empire Technology Development LLC	China	ZL201380076737.5 201380076737.5	Mar 22, 2013	Issued
Empire Technology Development LLC	India	6408/CHENP/2015	Mar 22, 2013	Published
Empire Technology Development LLC	United States of America	9932319 14/894616	Nov 30, 2015	Issued
Empire Technology Development LLC	European Patent Office	3004070 13885964.0	May 28, 2013	Issued
Empire Technology Development LLC	United Kingdom	3004070 13885964.0	May 28, 2013	Issued
Empire Technology Development LLC	France	3004070 13885964.0	May 28, 2013	Issued
Empire Technology Development LLC	Germany	3004070 602013027979.9	May 28, 2013	Issued
Empire Technology Development LLC	European Patent Office	2994305 13884101.0	May 6, 2013	Issued

Empire Technology Development LLC	United Kingdom	2994305	13884101.0	May 6, 2013	Issued
Empire Technology Development LLC	France	2994305	13884101.0	May 6, 2013	Issued
Empire Technology Development LLC	Germany	2994305	602013031515.9	May 6, 2013	Issued
Empire Technology Development LLC	United States of America		14/889,713	Nov 6, 2015	Published
Empire Technology Development LLC	United States of America		9345908 13/978109	Jul 2, 2013	Issued
Empire Technology Development LLC	European Patent Office		13898847.2	Dec 2, 2013	Marked for Impairing
Empire Technology Development LLC	China	2013800820235	201380082023.5	Dec 2, 2013	Issued
Empire Technology Development LLC	United States of America		15/101,394	Jun 2, 2016	Marked for Impairing
Empire Technology Development LLC	United States of America		9848884 14/125929	Jul 12, 2014	Issued
Empire Technology Development LLC	United States of America		14/894,814	Nov 30, 2015	Published
Empire Technology Development LLC	United States of America		9732292 14/767188	Aug 11, 2015	Issued
Empire Technology Development LLC	China	ZL201380075781.4	201380075781.4	Mar 20, 2013	Issued
Empire Technology Development LLC	China	ZL201380074837.4	201380074837.4	Apr 30, 2013	Issued
Empire Technology Development LLC	China	2013800809024	201380080902.4	Nov 12, 2013	Issued
Empire Technology Development LLC	United States of America		15/036,308	May 12, 2016	Pending
Empire Technology Development LLC	China	ZL2013800781921	201380078192.1	Jul 16, 2013	Issued
Empire Technology Development LLC	United States of America		14/905,729	Jan 15, 2016	Published
Empire Technology Development LLC	China	ZL2013800816649	201380081664.9	Dec 16, 2013	Issued
Empire Technology Development LLC	United States of America		9877727 14/001764	Aug 27, 2013	Issued
Empire Technology Development LLC	United States of America		9772431 14/889780	Nov 6, 2015	Issued
Empire Technology Development LLC	Japan	6073035	2016-512886	May 7, 2013	Issued
Empire Technology Development LLC	China		201380079174.5	Jun 28, 2013	Allowed
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Empire Technology Development LLC	European Patent Office	3013367	13888488.7	Jun 28, 2013	Issued
Empire Technology Development LLC	United Kingdom	3013367	13888488.7	Jun 28, 2013	Issued
Empire Technology Development LLC	France	3013367	13888488.7	Jun 28, 2013	Issued
Empire Technology Development LLC	Germany	3013367	60201032444.1	Jun 28, 2013	Issued
Empire Technology Development LLC	United States of America		14/891,752	Nov 17, 2015	Published
Empire Technology Development LLC	United States of America		9535043 14/130956	Jan 6, 2014	Issued
Empire Technology Development LLC	United States of America		9228996 14/114738	Oct 29, 2013	Issued
Empire Technology Development LLC	United States of America		14/888,564	Nov 2, 2015	Marked for Impairing
Empire Technology Development LLC	China		201380076256.4	May 2, 2013	Marked for Impairing
Empire Technology Development LLC	United States of America		9855149 14/488910	Sep 17, 2014	Issued
Empire Technology Development LLC	United States of America		9556134 14/894660	Nov 30, 2015	Issued
Empire Technology Development LLC	European Patent Office	3004069	13885836.0	May 28, 2013	Issued
Empire Technology Development LLC	United States of America		9840480 15/377666	Dec 13, 2016	Issued

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Empire Technology Development LLC	France	3004069	13885836.0	May 28, 2013	Issued
Empire Technology Development LLC	United States of America		15/031,188	Apr 21, 2016	Marked for Impairing
Empire Technology Development LLC	European Patent Office	3060070	13896135.4	Oct 23, 2013	Issued
Empire Technology Development LLC	Germany	3060070	602013044086.7	Oct 23, 2013	Issued
Empire Technology Development LLC	United Kingdom	3060070	13896135.4	Oct 23, 2013	Issued
Empire Technology Development LLC	United States of America		15/032,040	Apr 25, 2016	Published
Empire Technology Development LLC	China		201380080427.0	Oct 23, 2013	Published
Empire Technology Development LLC	India		201617013082	Oct 23, 2013	Published
Empire Technology Development LLC	United States of America		14/426,161	Mar 5, 2015	Marked for Impairing
Empire Technology Development LLC	United States of America		9955974 14/394408	Oct 14, 2014	Issued
Empire Technology Development LLC	United States of America		15/026,070	Jul 15, 2016	Published
Empire Technology Development LLC	European Patent Office		13894194.3	Sep 30, 2013	Published
Empire Technology Development LLC	United States of America		15/031,713	Apr 22, 2016	Published
Empire Technology Development LLC	European Patent Office		13898534.6	Dec 2, 2013	Marked for Impairing
Empire Technology Development LLC	United States of America		10106494 15/101396	Jun 2, 2016	Issued
Empire Technology Development LLC	China	2013800813636	201380081363.6	Dec 2, 2013	Issued
Empire Technology Development LLC	United States of America		9945982 15/035371	May 9, 2016	Issued
Empire Technology Development LLC	United States of America		9246689 14/358708	May 15, 2014	Issued
Empire Technology Development LLC	United States of America		9559850 14/967395	Dec 14, 2015	Issued
Empire Technology Development LLC	United States of America		9870515 15/037329	May 18, 2016	Issued
Empire Technology Development LLC	United States of America		9895174 15/127086	Sep 19, 2016	Issued
Empire Technology Development LLC	European Patent Office		14886619.7	Mar 18, 2014	Published
Empire Technology Development LLC	United States of America		14/485,518	Sep 12, 2014	Published
Empire Technology Development LLC	United States of America		9366858 14/424414	Feb 26, 2015	Issued
Empire Technology Development LLC	United States of America		9325495 14/372294	Jul 15, 2014	Issued
Empire Technology Development LLC	United States of America		9512150 14/448938	Jul 31, 2014	Issued
Empire Technology Development LLC	United States of America		9724086 14/579994	Dec 22, 2014	Issued
Empire Technology Development LLC	United States of America		9746622 14/778601	Sep 20, 2015	Issued
Empire Technology Development LLC	United States of America		9891393 14/340511	Jul 24, 2014	Issued
Empire Technology Development LLC	United States of America		14/610,304	Jan 30, 2015	Published
Empire Technology Development LLC	China		201610064489.8	Jan 29, 2016	Published
Empire Technology Development LLC	United States of America		15/100,989	Jun 2, 2016	Published
Empire Technology Development LLC	United States of America		9735543 14/466684	Aug 22, 2014	Issued
Empire Technology Development LLC	United States of America		9696494 15/112151	Jul 15, 2016	Issued

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Empire Technology Development LLC	United States of America	9917032 14/449074	Jul 31, 2014	Issued
Empire Technology Development LLC	United States of America	9994597 15/306471	Oct 24, 2016	Issued
Empire Technology Development LLC	United States of America	14/449,571	Aug 1, 2014	Published
Empire Technology Development LLC	Taiwan R.O.C.	104124731	Jul 30, 2015	Published
Empire Technology Development LLC	Republic of Korea	10-2017-7005801	Aug 3, 2015	Published
Empire Technology Development LLC	China	201580051811.7	Aug 3, 2015	Published
Empire Technology Development LLC	United States of America	9392443 14/448267	Jul 31, 2014	Issued
Empire Technology Development LLC	Republic of Korea	10-1745778	May 29, 2015	Issued
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Empire Technology Development LLC	Republic of Korea	10-1586387	Jun 20, 2011	Issued
Empire Technology Development LLC	Japan	5726373	Jun 20, 2011	Issued
Empire Technology Development LLC	United States of America	9225853 13/505723	May 2, 2012	Issued
Empire Technology Development LLC	Republic of Korea	10-1520569	Aug 17, 2011	Issued
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Empire Technology Development LLC	Japan	5851609	Aug 17, 2011	Issued
Empire Technology Development LLC	United States of America	8977129 13/805761	Dec 20, 2012	Issued
Empire Technology Development LLC	United States of America	9124958 13/805775	Dec 20, 2012	Issued
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Empire Technology Development LLC	Japan	6130403	Feb 24, 2012	Issued
Empire Technology Development LLC	United States of America	13/636,778	Sep 24, 2012	Marked for Impairing
Empire Technology Development LLC	United States of America	9491425 13/825516	Mar 21, 2013	Issued
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Empire Technology Development LLC	United States of America	10085879 13/637350	Sep 25, 2012	Issued
Empire Technology Development LLC	United States of America	8868474 13/997886	Jun 25, 2013	Issued
Empire Technology Development LLC	China	ZL201280075098.6	Aug 1, 2012	Issued
Empire Technology Development LLC	United States of America	9032072 13/814851	Feb 7, 2013	Issued
Empire Technology Development LLC	China	ZL201280075197.4	Aug 8, 2012	Issued
Empire Technology Development LLC	United States of America	9413858 14/681037	Apr 7, 2015	Issued
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Empire Technology Development LLC	United States of America	9986580 15/024040	Mar 23, 2016	Issued
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Empire Technology Development LLC	United States of America	15/122,094	Aug 26, 2016	Published
Empire Technology Development LLC	United States of America	9734889 14/579239	Dec 22, 2014	Issued
Empire Technology Development LLC	United States of America	10044496 15/101935	Jun 6, 2016	Issued
Empire Technology Development LLC	United States of America	9256470 14/447216	Jul 30, 2014	Issued
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Empire Technology Development LLC	United States of America	14/300,846	Jun 10, 2014	Marked for Impairing
Empire Technology Development LLC	United States of America	10007790 14/298726	Jun 6, 2014	Issued
Empire Technology Development LLC	United States of America	9813238 14/498312	Sep 26, 2014	Issued
Empire Technology Development LLC	United States of America	15/790,864	Oct 23, 2017	Marked for Impairing
Empire Technology Development LLC	United States of America	9710330 14/515214	Oct 15, 2014	Issued
Empire Technology Development LLC	United States of America	15/643,993	Jul 7, 2017	Published
Empire Technology Development LLC	United States of America	9744870 14/538615	Nov 11, 2014	Issued
Empire Technology Development LLC	United States of America	15/687,695	Aug 28, 2017	Published
Empire Technology Development LLC	United States of America	10,158,969 15/461,715	Mar 17, 2017	Allowed
Empire Technology Development LLC	United States of America	9602955 14/717498	May 20, 2015	Issued
Empire Technology Development LLC	United States of America	16/194,254	Nov 16, 2018	Pending
Empire Technology Development LLC	China	201680028979.0	May 5, 2016	Published
Empire Technology Development LLC	China	ZL200810041373.8 200810041373.8	Aug 4, 2008	Issued
Empire Technology Development LLC	United States of America	8555953 12/535542	Aug 4, 2009	Issued
Empire Technology Development LLC	China	ZL200810041372.3 200810041372.3	Aug 4, 2008	Issued
Empire Technology Development LLC	United States of America	8944150 12/535530	Aug 4, 2009	Issued
Empire Technology Development LLC	United States of America	8873801 13/380819	Dec 24, 2011	Issued
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Empire Technology Development LLC	United States of America	8902111 12/707510	Feb 17, 2010	Issued
Empire Technology Development LLC	China	ZL200910167460.2 200910167460.2	Aug 25, 2009	Issued
Empire Technology Development LLC	United States of America	8380239 12/707523	Feb 17, 2010	Issued
Empire Technology Development LLC	United States of America	8480574 12/770120	Apr 29, 2010	Issued
Empire Technology Development LLC	United States of America	9254159 12/554702	Sep 4, 2009	Issued
Empire Technology Development LLC	United States of America	9375226 12/727935	Mar 19, 2010	Issued
Empire Technology Development LLC	United States of America	8671293 13/878238	Apr 8, 2013	Issued
Empire Technology Development LLC	China	ZL201180062034.8 201180062034.8	Sep 21, 2011	Issued
Empire Technology Development LLC	Japan	5695766 2013-550738	Sep 21, 2011	Issued
Empire Technology Development LLC	Republic of Korea	10-1529016 10-2014-7007447	Sep 21, 2011	Issued
Empire Technology Development LLC	United States of America	8548574 12/835277	Sep 21, 2011	Issued
Empire Technology Development LLC	United States of America	8686850 12/707496	Jul 13, 2010	Issued
Empire Technology Development LLC	United States of America	8648731 13/132080	Feb 17, 2010	Issued
Empire Technology Development LLC	United States of America		Jun 1, 2011	Issued

Empire Technology Development LLC	Republic of Korea	10-1433497	10-2012-7025738	Jun 9, 2010	Issued
Empire Technology Development LLC	China	ZL201080064557.1	201080064557.1	Jun 9, 2010	Issued
Empire Technology Development LLC	United States of America	8174934	12/844839	Jul 28, 2010	Issued
Empire Technology Development LLC	Japan	5250089	2011-163783	Jul 27, 2011	Issued
Empire Technology Development LLC	United States of America	8232859	12/539338	Aug 11, 2009	Issued
Empire Technology Development LLC	Japan	5525217	2009-210240	Sep 11, 2009	Issued
Empire Technology Development LLC	China	ZL201080032744.1	201080032744.1	May 20, 2010	Issued
Empire Technology Development LLC	Japan	5736474	2014-025825	Feb 13, 2014	Issued
Empire Technology Development LLC	Germany		112010003260.2	May 20, 2010	Published
Empire Technology Development LLC	United States of America	8863445	13/202988	Aug 24, 2011	Issued
Empire Technology Development LLC	United States of America	9268134	13/148724	Aug 10, 2011	Issued
Empire Technology Development LLC	Japan	5767705	2013-524331	Aug 27, 2010	Issued
Empire Technology Development LLC	United States of America	9551876	14/985782	Dec 31, 2015	Issued
Empire Technology Development LLC	United States of America	9020618	13/119896	Mar 18, 2011	Issued
Empire Technology Development LLC	United States of America	9539087	13/123440	Apr 8, 2011	Issued
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Empire Technology Development LLC	Germany	2563273	602010044737.5	Apr 28, 2010	Issued
Empire Technology Development LLC	France	2563273	10850479.6	Apr 28, 2010	Issued
Empire Technology Development LLC	United Kingdom	2563273	10850479.6	Apr 28, 2010	Issued
Empire Technology Development LLC	China	ZL201080066902.5	201080066902.5	May 28, 2010	Issued
Empire Technology Development LLC	Japan	5756516	2013-511502	May 28, 2010	Issued
Empire Technology Development LLC	United States of America	8917871	13/129796	May 17, 2011	Issued
Empire Technology Development LLC	Republic of Korea	10-1502930	10-2013-7001366	Jun 18, 2010	Issued
Empire Technology Development LLC	Japan	5629823	2013-514518	Jun 18, 2010	Issued
Empire Technology Development LLC	United States of America	9742558	14/532475	Nov 4, 2014	Issued
Empire Technology Development LLC	United States of America	8160731	12/543492	Aug 18, 2009	Issued
Empire Technology Development LLC	United States of America	7958970	12/553091	Sep 2, 2009	Issued
Empire Technology Development LLC	Japan	5394866	2009-213875	Sep 16, 2009	Issued
Empire Technology Development LLC	United States of America	8874405	12/943219	Nov 10, 2010	Issued
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Empire Technology Development LLC	United States of America	8279060	12/538884	Aug 11, 2009	Issued
Empire Technology Development LLC	United States of America	8253554	12/538881	Aug 11, 2009	Issued
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Empire Technology Development LLC	United States of America	8483941	12/849828	Aug 4, 2010	Issued
Empire Technology Development LLC	United States of America	8996439	13/203969	Aug 30, 2011	Issued

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Empire Technology Development LLC	India		9118/CHENP/2012	May 5, 2010	Published
Empire Technology Development LLC	United States of America	9055976	13/319148	Nov 7, 2011	Issued
Empire Technology Development LLC	United States of America	8314503	12/709060	Feb 19, 2010	Issued
Empire Technology Development LLC	United States of America	9136598	13/129879	May 18, 2011	Issued
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Empire Technology Development LLC	Japan	5575983	2013-514519	Jun 18, 2010	Issued
Empire Technology Development LLC	United States of America	8887169	13/202226	Aug 18, 2011	Issued
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Empire Technology Development LLC	China	ZL201080067605.2	201080067605.2	Apr 23, 2010	Issued
Empire Technology Development LLC	Republic of Korea	10-1442051	10-2012-7030725	Apr 23, 2010	Issued
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Empire Technology Development LLC	China	ZL201080068055.6	201080068055.6	Oct 11, 2010	Issued
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Empire Technology Development LLC	United States of America	9192812	13/255237	Sep 7, 2011	Issued
Empire Technology Development LLC	China	8566363	13/376804	Dec 7, 2011	Issued
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Empire Technology Development LLC	Japan	5730413	2013-554774	Feb 25, 2011	Issued
Empire Technology Development LLC	United States of America	8579543	13/254970	Sep 6, 2011	Issued
Empire Technology Development LLC	China	ZL201080067537.X	201080067537.X	Aug 19, 2010	Issued
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Empire Technology Development LLC	United States of America	9245049	13/496773	Mar 16, 2012	Issued
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Empire Technology Development LLC	Japan	5651789	2013-553760	Feb 16, 2011	Issued
Empire Technology Development LLC	United States of America		13/203,977	Aug 30, 2011	Published
Empire Technology Development LLC	United States of America		14/368,216	Nov 26, 2014	Published
Empire Technology Development LLC	China	ZL201010214848.6	201010214848.6	Jun 29, 2010	Issued
Empire Technology Development LLC	United States of America	8809766	13/807148	Dec 27, 2012	Issued
Empire Technology Development LLC	Japan	5654674	2013-516979	Jun 28, 2011	Issued

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Empire Technology Development LLC	United States of America	8903325	13/634199	Sep 11, 2012	Issued
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Empire Technology Development LLC	China	ZL201080070346.9	201080070346.9	Dec 17, 2010	Issued
Empire Technology Development LLC	Republic of Korea	10-1540868	10-2013-7007514	Dec 17, 2010	Issued
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Empire Technology Development LLC	United States of America	8958839 13/318391	Nov 1, 2011	Issued
Empire Technology Development LLC	China	ZL201180072148.0	May 9, 2011	Issued
Empire Technology Development LLC	European Patent Office	2708076	May 9, 2011	Issued
Empire Technology Development LLC	Japan	5793238	May 9, 2011	Issued
Empire Technology Development LLC	Republic of Korea	10-1609037	May 9, 2011	Issued
Empire Technology Development LLC	United Kingdom	EP2708076	May 9, 2011	Issued
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Empire Technology Development LLC	France	EP2708076	May 9, 2011	Issued
Empire Technology Development LLC	United States of America	9361360 13/814940	Feb 8, 2013	Issued
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Empire Technology Development LLC	United Kingdom	2697912	Apr 15, 2011	Issued
Empire Technology Development LLC	Germany	2697912	Apr 15, 2011	Issued
Empire Technology Development LLC	France	2697912	Apr 15, 2011	Issued
Empire Technology Development LLC	United States of America	9754794 14/425326	Jun 15, 2015	Issued
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Empire Technology Development LLC	United States of America	14/410,902	Dec 23, 2014	Published
Empire Technology Development LLC	United States of America	8675598 13/322285	Nov 23, 2011	Issued
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Empire Technology Development LLC	Japan	5970551	Nov 2, 2011	Issued
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Empire Technology Development LLC	China	ZL201280073575.5	May 31, 2012	Issued
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Empire Technology Development LLC	France	2856660 12877989.9	May 31, 2012	Issued
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Empire Technology Development LLC	United States of America	15/507,389	Feb 28, 2017	Published
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Empire Technology Development LLC	China	201480075222.8	Feb 27, 2014	Issued
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Empire Technology Development LLC	Republic of Korea	10-1923011 10-2017-7012635	Oct 10, 2014	Issued
Empire Technology Development LLC	United States of America	15/500,928	Jan 31, 2017	Published
Empire Technology Development LLC	European Patent Office	14899031.0	Aug 1, 2014	Published
Empire Technology Development LLC	United States of America	9819690 14/768960	Aug 19, 2015	Issued
Empire Technology Development LLC	United States of America	15/540,317	Jun 28, 2017	Published
Empire Technology Development LLC	United States of America	15/564,794	Oct 6, 2017	Published
Empire Technology Development LLC	United States of America	9740763 14/777668	Sep 16, 2015	Issued
Empire Technology Development LLC	United States of America	9781042 14/905837	Jan 18, 2016	Issued
Empire Technology Development LLC	United States of America	9100938 13/817926	Feb 20, 2013	Issued
Empire Technology Development LLC	China	201280073854.1	May 9, 2012	Marked for Impairing
Empire Technology Development LLC	European Patent Office	12876551.8	May 9, 2012	Published
Empire Technology Development LLC	United States of America	9846889 13/701131	Nov 30, 2012	Issued
Empire Technology Development LLC	China	ZL201280072260.9 201280072260.9	Apr 9, 2012	Issued
Empire Technology Development LLC	United States of America	9773111 13/825272	Mar 20, 2013	Issued
Empire Technology Development LLC	China	ZL201280075285.4 201280075285.4	Aug 14, 2012	Issued
Empire Technology Development LLC	United States of America	9306973 13/809482	Jan 10, 2013	Issued
Empire Technology Development LLC	Republic of Korea	10-1723099 10-2015-7005952	Aug 6, 2012	Issued
Empire Technology Development LLC	United States of America	9697356 13/878707	Apr 10, 2013	Issued
Empire Technology Development LLC	China	ZL 201280075361.1 201280075361.1	Aug 21, 2012	Issued
Empire Technology Development LLC	United States of America	9369440 13/877578	Apr 3, 2013	Issued
Empire Technology Development LLC	China	ZL201280074892.9 201280074892.9	Jul 24, 2012	Issued
Empire Technology Development LLC	United States of America	9298931 13/882491	Apr 29, 2013	Issued
Empire Technology Development LLC	Republic of Korea	10-1723877 10-2015-7006643	Aug 15, 2012	Issued
Empire Technology Development LLC	United States of America	15/049,537	Feb 22, 2016	Marked for Impairing
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Empire Technology Development LLC	Republic of Korea	10-1620536 10-2015-7005477	Aug 1, 2012	Issued
Empire Technology Development LLC	United States of America	14/441,622	May 8, 2015	Published
Empire Technology Development LLC	United States of America	9619298 14/130128	Dec 30, 2013	Issued

Empire Technology Development LLC	United States of America	9866560	14/007560	Sep 25, 2013	Issued
Empire Technology Development LLC	United States of America		15/864,068	Jan 8, 2018	Published
Empire Technology Development LLC	United States of America	9430350	13/983654	Aug 5, 2013	Issued
Empire Technology Development LLC	Republic of Korea	10-1681440	10-2015-7013449	Dec 6, 2012	Issued
Empire Technology Development LLC	United States of America		13/976,661	Jan 22, 2014	Published
Empire Technology Development LLC	United States of America	9286185	13/995794	Jun 19, 2013	Issued
Empire Technology Development LLC	United States of America	9408243	14/408135	Dec 15, 2014	Issued
Empire Technology Development LLC	Republic of Korea	10-1786541	10-2015-7035401	May 13, 2013	Issued
Empire Technology Development LLC	United States of America	9713186	15/200648	Jul 1, 2016	Issued
Empire Technology Development LLC	China		201380078336.3	Jul 25, 2013	Allowed
Empire Technology Development LLC	United States of America	9817626	14/352266	Apr 16, 2014	Issued
Empire Technology Development LLC	United States of America	9699243	14/342377	Mar 1, 2014	Issued
Empire Technology Development LLC	United States of America	9350909	13/978850	Jun 19, 2017	Published
Empire Technology Development LLC	United States of America		15/098,740	Jul 9, 2013	Issued
Empire Technology Development LLC	United States of America	10079743	14/008377	Apr 14, 2016	Published
Empire Technology Development LLC	Taiwan R.O.C.	1556601	103111101	Sep 27, 2013	Issued
Empire Technology Development LLC	Republic of Korea	10-1737777	10-2015-7034682	Mar 25, 2014	Issued
Empire Technology Development LLC	United States of America	9390682	14/232172	May 6, 2013	Issued
Empire Technology Development LLC	United States of America	9998411	13/981544	Jan 10, 2014	Issued
Empire Technology Development LLC	United States of America	9846661	14/333943	Jul 24, 2013	Issued
Empire Technology Development LLC	China	2015104244743	201510424474.3	Jul 17, 2014	Issued
Empire Technology Development LLC	United States of America	9898195	14/371706	Jul 17, 2015	Issued
Empire Technology Development LLC	United States of America	9965626	14/370399	Jul 10, 2014	Issued
Empire Technology Development LLC	Republic of Korea	10-1723100	10-2016-7003975	Jul 2, 2014	Issued
Empire Technology Development LLC	United States of America		15/973,455	Jul 18, 2013	Issued
Empire Technology Development LLC	United States of America		15/477,784	May 7, 2018	Published
Empire Technology Development LLC	United States of America	9626773	14/358056	Apr 3, 2017	Allowed
Empire Technology Development LLC	Republic of Korea	10-1753200	10-2016-7007249	May 14, 2014	Issued
Empire Technology Development LLC	United States of America	9232563	14/118649	Sep 9, 2013	Issued
Empire Technology Development LLC	United States of America		15/843,174	Nov 19, 2013	Issued
Empire Technology Development LLC	United States of America	9852634	14/372104	Dec 15, 2017	Allowed
Empire Technology Development LLC	Republic of Korea		10-2016-7010751	Jul 14, 2014	Issued
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Empire Technology Development LLC	Republic of Korea		10-2016-7006773	Jan 22, 2014	Marked for Impairing
Empire Technology Development LLC	United States of America	9946040	15/112165	Aug 22, 2013	Marked for Impairing
Empire Technology Development LLC	United States of America			Jul 15, 2016	Issued

Empire Technology Development LLC	United States of America	9743250	14/343653	Mar 7, 2014	Issued
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Empire Technology Development LLC	Japan	6280570	2015-557998	Oct 28, 2013	Issued
Empire Technology Development LLC	Japan		2018-006867	Oct 28, 2013	Pending
Empire Technology Development LLC	European Patent Office		13896373.1	Oct 28, 2013	Published
Empire Technology Development LLC	United States of America	9338761	14/382662	Sep 3, 2014	Issued
Empire Technology Development LLC	United States of America	9769311	15/092773	Apr 7, 2016	Issued
Empire Technology Development LLC	United States of America	10003687	15/705726	Sep 15, 2017	Issued
Empire Technology Development LLC	United States of America		15/953,229	Apr 13, 2018	Published
Empire Technology Development LLC	United States of America	10123126	15/114411	Jul 27, 2016	Issued
Empire Technology Development LLC	United States of America	9913048	15/117165	Aug 5, 2016	Issued
Empire Technology Development LLC	United States of America		15/115,273	Jul 29, 2016	Allowed
Empire Technology Development LLC	United States of America	9778366	14/378184	Aug 12, 2014	Issued
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Empire Technology Development LLC	Japan	6205498	2016-545308	Jan 31, 2014	Issued
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Empire Technology Development LLC	United States of America		15/991,734	May 29, 2018	Published
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Empire Technology Development LLC	Republic of Korea	10-1827550	10-2016-7022752	Jan 31, 2014	Issued
Empire Technology Development LLC	European Patent Office		14880509.6	Jan 31, 2014	Published
Empire Technology Development LLC	United States of America	9990772	14/384870	Sep 12, 2014	Issued
Empire Technology Development LLC	Japan	6334715	2016-547936	Jan 31, 2014	Issued
Empire Technology Development LLC	European Patent Office		14881231.6	Jan 31, 2014	Published
Empire Technology Development LLC	United States of America	10147293	14/425591	Mar 3, 2015	Issued
Empire Technology Development LLC	United States of America	9471129	14/454121	Aug 7, 2014	Issued
Empire Technology Development LLC	United States of America	9747924	14/440236	May 1, 2015	Issued
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Empire Technology Development LLC	United States of America	9900841 15/277678	Sep 27, 2016 Issued
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Empire Technology Development LLC	United States of America	9937666 14/296380	Jun 4, 2014 Issued
Empire Technology Development LLC	United States of America	15/934,891	Mar 23, 2018 Published
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Empire Technology Development LLC	Republic of Korea	10-1821982 10-2016-7021280	Jan 31, 2014 Issued
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Empire Technology Development LLC	Germany	3100240 14880818.1	Jan 31, 2014 Issued
Empire Technology Development LLC	United Kingdom	3100240 14880818.1	Jan 31, 2014 Issued
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Empire Technology Development LLC	Republic of Korea	10-2015-0072691	May 26, 2015 Marked for Impairing
Empire Technology Development LLC	China	2015104898193 201510489819.3	Aug 11, 2015 Issued
Empire Technology Development LLC	United States of America	14/456,107	Aug 11, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	9858811 14/518144	Oct 20, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1820575 10-2015-0144701	Oct 16, 2015 Issued
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Empire Technology Development LLC	United States of America	9432380 14/492938	Sep 22, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1723098 10-2015-0131558	Sep 17, 2015 Issued
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Empire Technology Development LLC	United States of America	15/622,385	Jun 14, 2017 Published
Empire Technology Development LLC	United States of America	9553882 14/480041	Sep 8, 2014 Issued
Empire Technology Development LLC	Japan	6081540 2015-159795	Aug 13, 2015 Issued
Empire Technology Development LLC	United States of America	9836650 14/617165	Feb 9, 2015 Issued
Empire Technology Development LLC	Japan	6050904 2016-017655	Feb 2, 2016 Issued
Empire Technology Development LLC	United States of America	14/434,062	Apr 7, 2015 Published
Empire Technology Development LLC	United States of America	14/787,849	Oct 29, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America	14/761,389	Jul 16, 2015 Marked for Impairing
Empire Technology Development LLC	India	278292 2121/CHE/2008	Aug 29, 2008 Issued
Empire Technology Development LLC	United States of America	8510241 12/541171	Aug 14, 2009 Issued
Empire Technology Development LLC	United States of America	8788622 12/551175	Aug 31, 2009 Issued
Empire Technology Development LLC	China	ZL201080023897.X 201080023897.X	Jun 15, 2010 Issued
Empire Technology Development LLC	United States of America	9268752 14/325501	Jul 8, 2014 Issued
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Empire Technology Development LLC	United States of America	8893496 12/506259	Jul 21, 2009 Issued

Empire Technology Development LLC	India	2055/DEL/2008	Aug 29, 2008	Published
Empire Technology Development LLC	United States of America	8310367 12/551164	Aug 31, 2009	Issued
Empire Technology Development LLC	India	2118/CHE/2008	Aug 29, 2008	Published
Empire Technology Development LLC	India	278313	Aug 29, 2008	Issued
Empire Technology Development LLC	United States of America	8290924 12/504684	Jul 17, 2009	Issued
Empire Technology Development LLC	United States of America	8296850 12/195786	Aug 21, 2008	Issued
Empire Technology Development LLC	India	1304/DEL/2008	May 28, 2008	Published
Empire Technology Development LLC	United States of America	8656176 12/257140	Oct 23, 2008	Issued
Empire Technology Development LLC	United States of America	9972008 14/100296	Dec 9, 2013	Issued
Empire Technology Development LLC	India	2131/CHE/2008	Sep 1, 2008	Published
Empire Technology Development LLC	United States of America	8248038 12/550197	Aug 28, 2009	Issued
Empire Technology Development LLC	China	ZL201080031906.X	May 26, 2010	Issued
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Empire Technology Development LLC	United States of America	8476794 12/551065	Aug 31, 2009	Issued
Empire Technology Development LLC	United States of America	8351017 12/648081	Dec 28, 2009	Issued
Empire Technology Development LLC	China	ZL201080044704.9	Aug 9, 2010	Issued
Empire Technology Development LLC	Japan	5524337	Aug 9, 2010	Issued
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Empire Technology Development LLC	United Kingdom	2433222	May 19, 2010	Issued
Empire Technology Development LLC	France	2433222	May 19, 2010	Issued
Empire Technology Development LLC	Germany	2433222	May 19, 2010	Issued
Empire Technology Development LLC	India	602010045404.5	May 20, 2009	Published
Empire Technology Development LLC	United States of America	1157/CHE/2009	Dec 15, 2009	Issued
Empire Technology Development LLC	China	8946112 12/638154	Sep 9, 2010	Issued
Empire Technology Development LLC	Japan	ZL201080048949.9	Sep 9, 2010	Issued
Empire Technology Development LLC	United States of America	5398918	Dec 19, 2014	Issued
Empire Technology Development LLC	European Patent Office	9474996 14/577932	Sep 9, 2010	Published
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Empire Technology Development LLC	China	8951783 13/254153	Nov 23, 2010	Issued
Empire Technology Development LLC	Japan	ZL201080065927.3	Nov 23, 2010	Issued
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Empire Technology Development LLC	India	8287719 12/750304	Feb 9, 2010	Published
Empire Technology Development LLC	United States of America	9513299 13/619620		
Empire Technology Development LLC	India	118/KOL/2010		

Empire Technology Development LLC	United States of America	9739512	13/102896	May 6, 2011	Issued
Empire Technology Development LLC	United States of America	8879240	13/130842	May 24, 2011	Issued
Empire Technology Development LLC	United States of America	8317917	13/390580	Feb 15, 2012	Issued
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Empire Technology Development LLC	United States of America	8863996	13/395839	Mar 13, 2012	Issued
Empire Technology Development LLC	United States of America	8845792	13/263998	Oct 12, 2011	Issued
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Empire Technology Development LLC	Japan	5820073	2014-525501	Oct 17, 2011	Issued
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Empire Technology Development LLC	United States of America	9324997	14/946216	Nov 19, 2015	Issued
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Empire Technology Development LLC	United States of America	9967215	15/463203	Mar 20, 2017	Issued
Empire Technology Development LLC	United States of America	8457885	13/498556	Mar 27, 2012	Issued
Empire Technology Development LLC	United States of America	8560238	13/859665	Apr 9, 2013	Issued
Empire Technology Development LLC	China	ZL201180066595.5	201180066595.5	Jun 16, 2011	Issued
Empire Technology Development LLC	United States of America	8731833	13/949125	Jul 23, 2013	Issued
Empire Technology Development LLC	India	0296/CHE/2011		Feb 1, 2011	Published
Empire Technology Development LLC	China	201510934136.4		Jun 16, 2011	Published
Empire Technology Development LLC	Republic of Korea	10-2017-7015524		Jun 16, 2011	Marked for Impairing
Empire Technology Development LLC	United States of America	9275404	13/497494	Mar 21, 2012	Issued
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Empire Technology Development LLC	Japan	5914634	2014-504400	Jun 13, 2011	Issued
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Empire Technology Development LLC	Japan	5883500	2014-505732	Jun 20, 2011	Issued
Empire Technology Development LLC	Germany	2700267	602011035320.9	Jun 20, 2011	Issued
Empire Technology Development LLC	France	2700267	11863999.6	Jun 20, 2011	Issued
Empire Technology Development LLC	United Kingdom	2700267	11863999.6	Jun 20, 2011	Issued
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Empire Technology Development LLC	China	ZL201180074267.X	Dec 5, 2011	Issued
Empire Technology Development LLC	Japan	5847951 2014-536343	Dec 5, 2011	Issued
Empire Technology Development LLC	Republic of Korea	10-1632648 10-2014-7013090	Dec 5, 2011	Issued
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Empire Technology Development LLC	United States of America	9055396 13/700393	Nov 27, 2012	Issued
Empire Technology Development LLC	United States of America	9288634 14/717644	May 20, 2015	Issued
Empire Technology Development LLC	United States of America	9712979 15/008143	Jan 27, 2016	Issued
Empire Technology Development LLC	India	0914/CHE/2012	Mar 13, 2012	Published
Empire Technology Development LLC	United States of America	9422165 14/397302	Oct 27, 2014	Issued
Empire Technology Development LLC	India	1665/CHE/2012	Apr 27, 2012	Published
Empire Technology Development LLC	United States of America	9416311 14/399277	Nov 6, 2014	Issued
Empire Technology Development LLC	China	ZL201280073041.2 201280073041.2	Nov 26, 2012	Issued
Empire Technology Development LLC	European Patent Office	12876127.7	Nov 26, 2012	Marked for Impairing
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Empire Technology Development LLC	Republic of Korea	10-1563277 10-2014-7016175	Mar 9, 2012	Issued
Empire Technology Development LLC	Japan	6129865 2014-545389	Mar 9, 2012	Issued
Empire Technology Development LLC	United States of America	15/050,856	Feb 23, 2016	Published
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Empire Technology Development LLC	Republic of Korea	10-1558471 10-2014-7021566	Mar 15, 2012	Issued
Empire Technology Development LLC	Japan	6077009 2014-552697	Mar 15, 2012	Issued
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Empire Technology Development LLC	Republic of Korea	10-1675818 10-2014-7021661	Mar 15, 2012	Issued
Empire Technology Development LLC	Japan	6244309 2014-546660	Mar 15, 2012	Issued
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Empire Technology Development LLC	United States of America	14/409,978	Dec 19, 2014	Marked for Impairing
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Empire Technology Development LLC	China	ZL201380067736.4 201380067736.4	Oct 28, 2013 Issued
Empire Technology Development LLC	United States of America	9864709 14/383895	Sep 8, 2014 Issued
Empire Technology Development LLC	United States of America	9405691 14/369913	Jun 30, 2014 Issued
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Empire Technology Development LLC	China	201380079041.8	Dec 4, 2013 Allowed
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Empire Technology Development LLC	China	201380074974.8	Jun 24, 2013 Allowed
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Empire Technology Development LLC	United States of America	9572165 14/833082	Aug 22, 2015 Issued
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Empire Technology Development LLC	India	2476/CHE/2014	May 19, 2014 Marked for Impairing
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Empire Technology Development LLC	China	ZL 2014800296117 201480029611.7	Mar 18, 2014 Issued
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Empire Technology Development LLC	China	ZL201480030663.6 201480030663.6	Mar 27, 2014 Issued
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Empire Technology Development LLC	India	1760/CHE/2013	Apr 22, 2013 Published
Empire Technology Development LLC	European Patent Office	13882828.0	Jun 24, 2013 Published
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Empire Technology Development LLC	United States of America	15/611,886	Jun 2, 2017 Published
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Empire Technology Development LLC	India		2489/CHE/2014	May 19, 2014	Marked for Impairing
Empire Technology Development LLC	United States of America		14/933,049	Nov 5, 2015	Allowed
Empire Technology Development LLC	India		5598/CHE/2014	Nov 6, 2014	Marked for Impairing
Empire Technology Development LLC	United States of America	10035124	14/824754	Aug 12, 2015	Issued
Empire Technology Development LLC	India		3959/CHE/2014	Aug 12, 2014	Marked for Impairing
Empire Technology Development LLC	United States of America	9621253	14/706926	May 7, 2015	Issued
Empire Technology Development LLC	India		2324/CHE/2014	May 9, 2014	Marked for Impairing
Empire Technology Development LLC	China		201510232848.1	May 8, 2015	Published
Empire Technology Development LLC	United States of America	9481622	14/660370	Mar 17, 2015	Issued
Empire Technology Development LLC	United States of America	9932495	14/694250	Apr 23, 2015	Issued
Empire Technology Development LLC	United States of America	10059589	15/326481	Jan 14, 2017	Issued
Empire Technology Development LLC	India		3474/CHE/2014	Jul 14, 2014	Marked for Impairing
Empire Technology Development LLC	PCT		PCT/IB2017/056914	Nov 6, 2017	Published
Empire Technology Development LLC	PCT		PCT/IB2017/056102	Oct 4, 2017	Published
Empire Technology Development LLC	PCT		PCT/IB2017/056174	Oct 6, 2017	Published
Empire Technology Development LLC	PCT		PCT/IB2017/057153	Nov 16, 2017	Published
Empire Technology Development LLC	United States of America		15/326,482	Jan 14, 2017	Marked for Impairing
Empire Technology Development LLC	India		3277/DEL/2015	Oct 12, 2015	Published
Empire Technology Development LLC	United States of America		15/290,161	Oct 11, 2016	Published
Empire Technology Development LLC	United States of America	8623127	12/666954	Dec 28, 2009	Issued
Empire Technology Development LLC	United States of America	9174366	14/092301	Nov 27, 2013	Issued
Empire Technology Development LLC	United States of America	8409910	12/593574	Sep 28, 2009	Issued
Empire Technology Development LLC	United States of America	9373805	13/793745	Mar 11, 2013	Issued
Empire Technology Development LLC	United States of America	8568862	12/530553	Sep 9, 2009	Issued
Empire Technology Development LLC	United States of America	9200012	14/054673	Oct 15, 2013	Issued
Empire Technology Development LLC	United States of America	8475916	12/597743	Oct 26, 2009	Issued
Empire Technology Development LLC	Japan	5027237	2009-529440	Mar 28, 2008	Issued
Empire Technology Development LLC	United States of America		8104093	Dec 18, 2009	Issued
Empire Technology Development LLC	United States of America		8631510	Dec 8, 2011	Issued

Empire Technology Development LLC	Japan	4269001	2008-553563	Jul 31, 2008	Issued
Empire Technology Development LLC	United States of America		8623663 12/665710	Dec 18, 2009	Issued
Empire Technology Development LLC	Japan	4269002	2008-553568	Jul 31, 2008	Issued
Empire Technology Development LLC	Japan	4465038	2009-529441	Aug 20, 2008	Issued
Empire Technology Development LLC	Japan	4648473	2009-188110	Aug 14, 2009	Issued
Empire Technology Development LLC	United States of America		8057976 12/544839	Aug 20, 2009	Issued
Empire Technology Development LLC	United States of America		8715530 12/663060	Dec 4, 2009	Issued
Empire Technology Development LLC	United States of America		9580645 14/194312	Feb 28, 2014	Issued
Empire Technology Development LLC	United States of America		8455092 12/663078	Dec 4, 2009	Issued
Empire Technology Development LLC	United States of America		8951627 12/663082	Dec 4, 2009	Issued
Empire Technology Development LLC	United States of America		8404078 12/601748	Nov 24, 2009	Issued
Empire Technology Development LLC	United States of America		8597460 13/767094	Feb 14, 2013	Issued
Empire Technology Development LLC	United States of America		8334051 12/601968	Nov 25, 2009	Issued
Empire Technology Development LLC	United States of America		8366867 12/664723	Dec 15, 2009	Issued
Empire Technology Development LLC	United States of America		8449180 12/161760	Jul 22, 2008	Issued
Empire Technology Development LLC	United States of America		9447284 12/598288	Oct 30, 2009	Issued
Empire Technology Development LLC	United States of America		8252249 11/783892	Apr 12, 2007	Issued
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Empire Technology Development LLC	United States of America		8592676 12/664242	Dec 11, 2009	Issued
Empire Technology Development LLC	United States of America		8623500 12/665027	Dec 16, 2009	Issued
Empire Technology Development LLC	United States of America		9330807 14/088737	Nov 25, 2013	Issued
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Empire Technology Development LLC	United States of America		8251885 12/564695	Dec 18, 2009	Issued
Empire Technology Development LLC	Japan	4994401	2009-023379	Sep 22, 2009	Issued
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Empire Technology Development LLC	Japan	4526597	2009-525828	Dec 17, 2009	Issued
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Empire Technology Development LLC	United States of America		8226863 12/639836	Jan 26, 2009	Issued
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Empire Technology Development LLC	United States of America		8058548 12/665015	Feb 4, 2009	Issued
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				Feb 4, 2009	Issued

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Empire Technology Development LLC	Japan	4368934	2009-027120	Feb 9, 2009	Issued
Empire Technology Development LLC	United States of America	8011603	12/642279	Dec 18, 2009	Issued
Empire Technology Development LLC	United States of America	8403239	13/193137	Jul 28, 2011	Issued
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Empire Technology Development LLC	United States of America	9080138	12/665020	Dec 16, 2009	Issued
Empire Technology Development LLC	Japan	4504459	2009-540538	Jan 29, 2009	Issued
Empire Technology Development LLC	United States of America	8232111	12/665434	Dec 18, 2009	Issued
Empire Technology Development LLC	Japan	4515538	2009-516768	Dec 8, 2008	Issued
Empire Technology Development LLC	United States of America	7907451	12/665320	Dec 17, 2009	Issued
Empire Technology Development LLC	Japan	4344782	2009-123183	May 21, 2009	Issued
Empire Technology Development LLC	United States of America	7741840	12/540766	Aug 13, 2009	Issued
Empire Technology Development LLC	Japan	4376299	2009-131536	May 29, 2009	Issued
Empire Technology Development LLC	United States of America	8137770	12/614014	Nov 6, 2009	Issued
Empire Technology Development LLC	United States of America	10002483	13/369136	Feb 8, 2012	Issued
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Empire Technology Development LLC	Japan	4931089	2009-060545	Mar 13, 2009	Issued
Empire Technology Development LLC	United States of America	8583452	12/640967	Dec 17, 2009	Issued
Empire Technology Development LLC	Japan	4369526	2009-060544	Mar 13, 2009	Issued
Empire Technology Development LLC	United States of America	7975284	12/568188	Sep 28, 2009	Issued
Empire Technology Development LLC	Japan	4573910	2009-545030	Mar 17, 2009	Issued
Empire Technology Development LLC	United States of America	8013866	12/665153	Dec 17, 2009	Issued
Empire Technology Development LLC	Japan	4614373	2009-545025	Mar 17, 2009	Issued
Empire Technology Development LLC	United States of America	8218054	12/665295	Dec 17, 2009	Issued
Empire Technology Development LLC	Japan	4726966	2009-020767	Jan 30, 2009	Issued
Empire Technology Development LLC	United States of America	9227504	12/642407	Dec 18, 2009	Issued
Empire Technology Development LLC	European Patent Office	2213496	09179687.0	Dec 17, 2009	Issued
Empire Technology Development LLC	Germany	2213496	602009009670.2	Dec 17, 2009	Issued
Empire Technology Development LLC	France	2213496	09179687.0	Dec 17, 2009	Issued
Empire Technology Development LLC	United Kingdom	2213496	09179687.0	Dec 17, 2009	Issued
Empire Technology Development LLC	Italy	2213496	502012902109845	Dec 17, 2009	Issued

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Empire Technology Development LLC	United States of America		9096846 12/645113	Dec 22, 2009	Issued
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Empire Technology Development LLC	United States of America		8569048 12/631623	Dec 4, 2009	Issued
Empire Technology Development LLC	United States of America		9050061 12/550629	Aug 31, 2009	Issued
Empire Technology Development LLC	United States of America		8951765 12/624972	Nov 24, 2009	Issued
Empire Technology Development LLC	United States of America		8736146 12/641662	Dec 18, 2009	Issued
Empire Technology Development LLC	Japan	5319433	2009-167900	Jul 16, 2009	Issued
Empire Technology Development LLC	United States of America		8817118 12/641115	Dec 17, 2009	Issued
Empire Technology Development LLC	United States of America		9237267 14/335583	Jul 18, 2014	Issued
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Empire Technology Development LLC	Japan	5437987	2010-282723	Dec 20, 2010	Issued
Empire Technology Development LLC	United States of America		8923960 13/682669	Nov 20, 2012	Issued
Empire Technology Development LLC	United States of America		8172777 12/559228	Sep 14, 2009	Issued
Empire Technology Development LLC	United States of America		9229779 12/647711	Dec 28, 2009	Issued
Empire Technology Development LLC	Japan	4519193	2009-174642	Jul 27, 2009	Issued
Empire Technology Development LLC	United States of America		7908144 12/641991	Dec 18, 2009	Issued
Empire Technology Development LLC	United States of America		9046762 12/708054	Feb 18, 2010	Issued
Empire Technology Development LLC	Japan	5380602	2012-501038	Jul 7, 2010	Issued
Empire Technology Development LLC	United States of America		8437985 12/645385	Dec 22, 2009	Issued
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Empire Technology Development LLC	United States of America		8282994 12/691462	Jan 21, 2010	Issued
Empire Technology Development LLC	China	ZL201080058087.8	201080058087.8	Jun 23, 2010	Issued
Empire Technology Development LLC	Japan	5579277	2012-548928	Jun 23, 2010	Issued
Empire Technology Development LLC	Japan	5579172	2011-514213	May 14, 2010	Issued
Empire Technology Development LLC	European Patent Office		10851425.8	May 14, 2010	Published
Empire Technology Development LLC	United States of America		8337967 13/201607	Aug 15, 2011	Issued
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Empire Technology Development LLC	Japan	5026483	2009-212434	Sep 14, 2009	Issued
Empire Technology Development LLC	Japan	4669567	2010-038398	Feb 24, 2010	Issued
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Empire Technology Development LLC	United States of America		8404441 12/762474	Apr 19, 2010	Issued
Empire Technology Development LLC	European Patent Office	2561357	10850390.5	May 28, 2010	Issued
Empire Technology Development LLC	United States of America		9029128 13/775882	Feb 25, 2013	Issued
Empire Technology Development LLC	France	2561357	10850390.5	May 28, 2010	Issued

Empire Technology Development LLC	United Kingdom	2561357	10850390.5	May 28, 2010	Issued
Empire Technology Development LLC	Germany	2561357	602010020625.4	May 28, 2010	Issued
Empire Technology Development LLC	Japan	5200044	2010-056236	Mar 12, 2010	Issued
Empire Technology Development LLC	United States of America	8388874	12/969011	Dec 15, 2010	Issued
Empire Technology Development LLC	United States of America	8581426	13/000456	Dec 21, 2010	Issued
Empire Technology Development LLC	Japan	4590018	2010-043430	Feb 26, 2010	Issued
Empire Technology Development LLC	United States of America	8538722	12/855908	Aug 13, 2010	Issued
Empire Technology Development LLC	Japan	4975841	2010-057926	Mar 15, 2010	Issued
Empire Technology Development LLC	United States of America	8451117	12/645495	Dec 23, 2009	Issued
Empire Technology Development LLC	Japan	4680312	2009-290053	Dec 22, 2009	Issued
Empire Technology Development LLC	United States of America	8405638	12/645176	Dec 22, 2009	Issued
Empire Technology Development LLC	Japan	4723667	2009-290427	Dec 22, 2009	Issued
Empire Technology Development LLC	United States of America	8427111	12/644660	Dec 22, 2009	Issued
Empire Technology Development LLC	United States of America	8773074	13/834941	Mar 15, 2013	Issued
Empire Technology Development LLC	Japan	4589447	2009-283043	Dec 14, 2009	Issued
Empire Technology Development LLC	United States of America	7981061	12/778352	May 12, 2010	Issued
Empire Technology Development LLC	Japan	5038451	2010-066464	Mar 23, 2010	Issued
Empire Technology Development LLC	Japan	4669560	2009-281319	Dec 11, 2009	Issued
Empire Technology Development LLC	United States of America	9206459	12/999469	Dec 16, 2010	Issued
Empire Technology Development LLC	Japan	4638551	2010-075108	Mar 29, 2010	Issued
Empire Technology Development LLC	Japan	4527194	2009-281897	Dec 11, 2009	Issued
Empire Technology Development LLC	United States of America	9607725	12/643434	Dec 21, 2009	Issued
Empire Technology Development LLC	United States of America	8767066	12/645496	Dec 23, 2009	Issued
Empire Technology Development LLC	United States of America	8441636	13/201124	Aug 11, 2011	Issued
Empire Technology Development LLC	China	ZL201080069836.7	201080069836.7	Nov 1, 2010	Issued
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Empire Technology Development LLC	United States of America	8501100	13/000796	Dec 22, 2010	Issued
Empire Technology Development LLC	China	ZL201080067388.7	201080067388.7	Jun 16, 2010	Issued
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Empire Technology Development LLC	Japan	5625109	2013-515316	Jun 18, 2010	Issued
Empire Technology Development LLC	United States of America	8585799	13/058944	Feb 14, 2011	Issued
Empire Technology Development LLC	Japan	5450897	2013-515304	Jun 15, 2010	Issued
Empire Technology Development LLC	United States of America	9303257	13/131152	May 25, 2011	Issued
Empire Technology Development LLC	Japan	5118120	2009-285400	Dec 16, 2009	Issued
Empire Technology Development LLC	United States of America	8395048	12/644754	Dec 22, 2009	Issued
Empire Technology Development LLC	Japan	4781477	2010-129060	Jun 4, 2010	Issued

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Empire Technology Development LLC	United States of America	9075430	13/392966	Feb 28, 2012	Issued
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Empire Technology Development LLC	China	ZL201180037763.8	201180037763.8	Apr 26, 2011	Issued
Empire Technology Development LLC	Republic of Korea	10-1505757	10-2013-7004806	Feb 26, 2013	Issued
Empire Technology Development LLC	United States of America	9001033	13/791692	Mar 8, 2013	Issued
Empire Technology Development LLC	United States of America	9478070	14/690396	Apr 18, 2015	Issued
Empire Technology Development LLC	Japan	4657369	2010-038300	Feb 24, 2010	Issued
Empire Technology Development LLC	United States of America	8172266	12/770008	Apr 29, 2010	Issued
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Empire Technology Development LLC	Japan	4615065	2010-036240	Feb 22, 2010	Issued
Empire Technology Development LLC	United States of America	8660679	13/139819	Jun 15, 2011	Issued
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Empire Technology Development LLC	Japan	5735128	2013-541969	Dec 2, 2010	Issued
Empire Technology Development LLC	United States of America	9215530	14/152271	Jan 10, 2014	Issued
Empire Technology Development LLC	Japan	4693192	2010-103610	Apr 28, 2010	Issued
Empire Technology Development LLC	United States of America	8125517	12/968952	Dec 15, 2010	Issued
Empire Technology Development LLC	United States of America	8487988	13/362062	Jan 31, 2012	Issued
Empire Technology Development LLC	Japan	5886435	2014-533289	Oct 7, 2011	Issued
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Empire Technology Development LLC	United States of America	8990291	12/993465	Nov 18, 2010	Issued
Empire Technology Development LLC	Japan	5735095	2013-502719	Jul 21, 2010	Issued
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Empire Technology Development LLC	France	2596431	10854991.6	Jul 21, 2010	Issued
Empire Technology Development LLC	United Kingdom	2596431	10854991.6	Jul 21, 2010	Issued
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Empire Technology Development LLC	Japan	5787909 2012-558123	Jul 2, 2010	Issued
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Empire Technology Development LLC	Japan	5180368	2011-505308	Oct 4, 2010	Issued
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Empire Technology Development LLC	China	ZL201080069490.0	201080069490.0	Oct 4, 2010	Issued
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Empire Technology Development LLC	Japan	3605642	2002-055387	Mar 1, 2002	Issued
Empire Technology Development LLC	Japan	4016101	2002-242208	Aug 22, 2002	Issued
Empire Technology Development LLC	United States of America	6950332 10/639471	03018621.7	Aug 13, 2003	Issued
Empire Technology Development LLC	European Patent Office	1391894	03018621.7	Aug 19, 2003	Issued
Empire Technology Development LLC	Republic of Korea	10-0563423	10-2003-0058006	Aug 21, 2003	Issued
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Empire Technology Development LLC	France	1391894	03018621.7	Aug 19, 2003	Issued
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Empire Technology Development LLC	Japan	3893456	2002-304124	Oct 18, 2002	Issued
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Empire Technology Development LLC	Germany	1411525	60323801.7	Oct 9, 2003	Issued
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Empire Technology Development LLC	France	1429351	03027820.4	Dec 3, 2003	Issued
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Empire Technology Development LLC	European Patent Office	13885479.9	13885479.9	May 30, 2013	Published
Empire Technology Development LLC	United States of America	9591691	13/922780	Jun 20, 2013	Issued
Empire Technology Development LLC	Japan	2014-125824	2014-125824	Jun 18, 2014	Published
Empire Technology Development LLC	United States of America	15/449,019	15/449,019	Mar 3, 2017	Published
Empire Technology Development LLC	United States of America	15/036,369	15/036,369	May 12, 2016	Published
Empire Technology Development LLC	United States of America	14/646,031	14/646,031	May 20, 2015	Published
Empire Technology Development LLC	United States of America	9952704	15/026611	Apr 1, 2016	Issued
Empire Technology Development LLC	United States of America	10021211	14/346855	Mar 24, 2014	Issued
Empire Technology Development LLC	United States of America	15/030,880	15/030,880	Apr 21, 2016	Marked for Impairing
Empire Technology Development LLC	United States of America	9847030	14/917278	Mar 8, 2016	Issued
Empire Technology Development LLC	United States of America	9236039	14/002595	Aug 30, 2013	Issued
Empire Technology Development LLC	United States of America	9734812	14/922671	Oct 26, 2015	Issued
Empire Technology Development LLC	United States of America	14/357,476	14/357,476	May 9, 2014	Marked for Impairing
Empire Technology Development LLC	Republic of Korea	10-2015-7036916	10-2015-7036916	May 30, 2013	Published
Empire Technology Development LLC	United States of America	9364138	14/115030	Oct 31, 2013	Issued
Empire Technology Development LLC	United States of America	10059327	15/106291	Jun 18, 2016	Issued
Empire Technology Development LLC	Japan	2016-541079	2016-541079	Dec 31, 2013	Marked for Impairing
Empire Technology Development LLC	United States of America	9785321	14/359478	May 20, 2014	Issued
Empire Technology Development LLC	Japan	6201041	2016-516487	May 30, 2013	Issued
Empire Technology Development LLC	Republic of Korea	10-1816014	10-2015-7037071	May 30, 2013	Issued
Empire Technology Development LLC	United States of America	15/115,622	15/115,622	Jul 29, 2016	Published
Empire Technology Development LLC	United States of America	14/897,216	14/897,216	Dec 9, 2015	Published
Empire Technology Development LLC	United States of America	15/121,788	15/121,788	Aug 26, 2016	Marked for Impairing

Empire Technology Development LLC	United States of America	14/916,573	Mar 4, 2016	Marked for Impairing
Empire Technology Development LLC	United States of America	14/398,014	Oct 30, 2014	Published
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Empire Technology Development LLC	United States of America	14/384,979	Sep 12, 2014	Marked for Impairing
Empire Technology Development LLC	China	201380081854.0	Dec 27, 2013	Marked for Impairing
Empire Technology Development LLC	United States of America	15/122,315	Aug 29, 2016	Marked for Impairing
Empire Technology Development LLC	Japan	2016-556015	Mar 21, 2014	Issued
Empire Technology Development LLC	United States of America	15/127,009	Sep 17, 2016	Published
Empire Technology Development LLC	European Patent Office	14886465.5	Mar 21, 2014	Published
Empire Technology Development LLC	China	201380081601.3	Dec 11, 2013	Marked for Impairing
Empire Technology Development LLC	United States of America	10101529 15/037789	May 19, 2016	Issued
Empire Technology Development LLC	United States of America	9740581 14/443909	May 19, 2015	Issued
Empire Technology Development LLC	United States of America	15/122,934	Sep 1, 2016	Marked for Impairing
Empire Technology Development LLC	United States of America	9939371 15/012585	Feb 1, 2016	Issued
Empire Technology Development LLC	United States of America	9985966 14/890022	Nov 9, 2015	Issued
Empire Technology Development LLC	United States of America	9734444 14/732424	Jun 5, 2015	Issued
Empire Technology Development LLC	China	201610346617.8	May 24, 2016	Published
Empire Technology Development LLC	United States of America	9735708 14/394475	Oct 15, 2014	Issued
Empire Technology Development LLC	United States of America	14/769,656	Aug 21, 2015	Published
Empire Technology Development LLC	European Patent Office	13900751.2	Dec 30, 2013	Marked for Impairing
Empire Technology Development LLC	United States of America	10038553 14/784111	Oct 13, 2015	Issued
Empire Technology Development LLC	United States of America	10058781 14/784427	Oct 14, 2015	Issued
Empire Technology Development LLC	United States of America	16/108,976	Aug 22, 2018	Pending
Empire Technology Development LLC	United States of America	15/303,841	Oct 13, 2016	Published
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Empire Technology Development LLC	United States of America	15/121,012	Aug 23, 2016	Published
Empire Technology Development LLC	India	201617033704	Mar 3, 2014	Published
Empire Technology Development LLC	United States of America	9444797 14/327814	Jul 10, 2014	Issued
Empire Technology Development LLC	United States of America	9907506 14/284579	May 22, 2014	Issued
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Empire Technology Development LLC	United States of America	9855004 14/631872	Feb 26, 2015	Issued
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Empire Technology Development LLC	United States of America	9749843 14/808172	Jul 24, 2015	Issued
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Empire Technology Development LLC	China	201510308900.7		Jun 8, 2015	Published
Empire Technology Development LLC	United States of America	9954625	14/888861	Nov 3, 2015	Issued
Empire Technology Development LLC	United States of America	15/941,130		Mar 30, 2018	Published

Empire Technology Development LLC	United States of America	9641660 14/784595	Oct 15, 2015	Issued
Empire Technology Development LLC	United States of America	9852445 14/295936	Jun 4, 2014	Issued
Empire Technology Development LLC	Republic of Korea	10-1724584 10-2015-0077833	Jun 2, 2015	Issued
Empire Technology Development LLC	United States of America	15/843,067	Dec 15, 2017	Published
Empire Technology Development LLC	United States of America	14/334,906	Jul 18, 2014	Allowed
Empire Technology Development LLC	China	201510422966.9	Jul 17, 2015	Published
Empire Technology Development LLC	United States of America	9813203 14/302434	Jun 12, 2014	Issued
Empire Technology Development LLC	China	201510320709.4	Jun 12, 2015	Published
Empire Technology Development LLC	United States of America	9646699 14/404002	Nov 25, 2014	Issued
Empire Technology Development LLC	United States of America	14/487,114	Sep 16, 2014	Allowed
Empire Technology Development LLC	Republic of Korea	10-2015-0130959	Sep 16, 2015	Issued
Empire Technology Development LLC	China	201510590527.9	Sep 16, 2015	Published
Empire Technology Development LLC	United States of America	14/430,757	Mar 24, 2015	Marked for Impairing
Empire Technology Development LLC	United States of America	15/545,448	Jul 21, 2017	Published
Empire Technology Development LLC	Republic of Korea	10-2015-0159735	Nov 13, 2015	Issued
Empire Technology Development LLC	United States of America	14/574,068	Dec 17, 2014	Published
Empire Technology Development LLC	United States of America	10037612 14/980692	Dec 28, 2015	Issued
Empire Technology Development LLC	United States of America	15/157,557	May 18, 2016	Marked for Impairing
Empire Technology Development LLC	United States of America	9347475 14/110919	Oct 9, 2013	Issued
Empire Technology Development LLC	United States of America	9188142 13/445805	Apr 12, 2012	Issued
Empire Technology Development LLC	United States of America	9422958 13/583540	Sep 7, 2012	Issued
Empire Technology Development LLC	United States of America	9506494 14/117618	Nov 13, 2013	Issued
Empire Technology Development LLC	China	ZL201280071816.2 201280071816.2	Jan 26, 2012	Issued
Empire Technology Development LLC	Australia	2012367292 2012367292	Jan 26, 2012	Issued
Empire Technology Development LLC	United States of America	9253857 13/509351	May 11, 2012	Issued
Empire Technology Development LLC	China	ZL201280000385.0 201280000385.0	Mar 5, 2012	Issued
Empire Technology Development LLC	Japan	5669982 2014-503664	Mar 5, 2012	Issued
Empire Technology Development LLC	United States of America	9693426 14/975690	Dec 18, 2015	Issued
Empire Technology Development LLC	Germany	112012000517.1	Mar 5, 2012	Published
Empire Technology Development LLC	Republic of Korea	10-1813750 10-2014-7027641	Apr 26, 2012	Issued
Empire Technology Development LLC	United States of America	9734144 14/891810	Nov 17, 2015	Issued
Empire Technology Development LLC	European Patent Office	14902019.0	Sep 18, 2014	Published
Empire Technology Development LLC	United States of America	9658877 13/003222	Jan 7, 2011	Issued
Empire Technology Development LLC	Taiwan R.O.C.	1537831 100125893	Jul 20, 2011	Issued
Empire Technology Development LLC	Japan	5636109 2013-525867	Aug 23, 2010	Issued
Empire Technology Development LLC	Republic of Korea	10-1480856 10-2013-7007485	Aug 23, 2010	Issued

Empire Technology Development LLC	Germany	112010005821.0	Aug 23, 2010	Published
Empire Technology Development LLC	United States of America	8384303 12/710508	Feb 23, 2010	Issued
Empire Technology Development LLC	United States of America	9153356 12/714482	Feb 27, 2010	Issued
Empire Technology Development LLC	China	ZL201080064465.3	May 21, 2010	Issued
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Empire Technology Development LLC	Japan	5483778 2012-544445	Dec 13, 2010	Issued
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Empire Technology Development LLC	United States of America	9507997	14/492814	Sep 22, 2014	Issued
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Empire Technology Development LLC	United States of America	8694932	12/200271	Aug 28, 2008	Issued
Empire Technology Development LLC	Japan	4878049	2008-291645	Nov 14, 2008	Issued
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Empire Technology Development LLC	Japan	5119129	2008-291636	Nov 14, 2008	Issued

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Empire Technology Development LLC	United States of America	15/138,383		Apr 26, 2016	Published
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Empire Technology Development LLC	Japan	5410947	2009-287071	Dec 18, 2009	Issued
Empire Technology Development LLC	United States of America	8694519	12/396939	Mar 3, 2009	Issued
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Empire Technology Development LLC	Japan	5337299	2012-516112	Jun 4, 2010	Issued
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Empire Technology Development LLC	Republic of Korea	10-1327698	10-2011-7029648	May 10, 2010	Issued

Empire Technology Development LLC	European Patent Office	2430761	10775310.5	May 10, 2010	Issued
Empire Technology Development LLC	United Kingdom	2430761	10775310.5	May 10, 2010	Issued
Empire Technology Development LLC	Germany	2430761	602010047809.2	May 10, 2010	Issued
Empire Technology Development LLC	France	2430761	10775310.5	May 10, 2010	Issued
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Empire Technology Development LLC	Germany	2465303	602010047540.9	Jun 7, 2010	Issued
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Empire Technology Development LLC	Japan	5740085	2009-287074	Dec 18, 2009	Issued
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Empire Technology Development LLC	Japan	5442854	2012-511902	May 13, 2010	Issued
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Empire Technology Development LLC	Japan	5216791	2010-024987	Feb 8, 2010	Issued
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Empire Technology Development LLC	Japan	5762545	Sep 28, 2010	Issued
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Empire Technology Development LLC	Israel	230953	230953	Aug 16, 2011	Issued
Empire Technology Development LLC	United States of America	9866948	14/483120	Sep 10, 2014	Issued
Empire Technology Development LLC	United Kingdom	2745536	EP11870957.5	Aug 16, 2011	Issued
Empire Technology Development LLC	Germany	2745536	602011023533.8	Aug 16, 2011	Issued
Empire Technology Development LLC	France	2745536	EP11870957.5	Aug 16, 2011	Issued
Empire Technology Development LLC	European Patent Office	15200544.3	15200544.3	Aug 16, 2011	Published
Empire Technology Development LLC	United States of America	15/854,117	15/854,117	Dec 26, 2017	Published
Empire Technology Development LLC	United States of America	8221711	13/386990	Jan 25, 2012	Issued
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Empire Technology Development LLC	Germany	112011100116.9	112011100116.9	Sep 16, 2011	Published

Empire Technology Development LLC	United States of America	14/265,991	Apr 30, 2014	Published
Empire Technology Development LLC	United States of America	9011968 13/391158	Feb 17, 2012	Issued
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Empire Technology Development LLC	China	ZL201280077067.4	201280077067.4	Sep 14, 2012	Issued
Empire Technology Development LLC	United States of America	9290598	13/749291	Jan 24, 2013	Issued
Empire Technology Development LLC	China	ZL201280071920.1	201280071920.1	Mar 29, 2012	Issued
Empire Technology Development LLC	United States of America	9207963	13/634448	Sep 12, 2012	Issued
Empire Technology Development LLC	Republic of Korea	10-1586469	10-2014-7022688	Feb 1, 2012	Issued
Empire Technology Development LLC	Japan	5937702	2014-555538	Feb 1, 2012	Issued
Empire Technology Development LLC	United States of America	9367292	13/582937	Sep 5, 2012	Issued
Empire Technology Development LLC	China	ZL201280073894.6	201280073894.6	Jun 11, 2012	Issued
Empire Technology Development LLC	United States of America	9103803	13/825492	Mar 21, 2013	Issued
Empire Technology Development LLC	China	ZL201280077608.3	201280077608.3	Oct 10, 2012	Issued
Empire Technology Development LLC	United States of America	9764304	13/879517	Dec 6, 2014	Issued
Empire Technology Development LLC	United States of America	8789047	13/512554	May 29, 2012	Issued
Empire Technology Development LLC	Republic of Korea	10-1658070	10-2014-7012271	Jan 26, 2012	Issued
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Empire Technology Development LLC	United States of America	9796857	14/654335	Jun 19, 2015	Issued
Empire Technology Development LLC	United States of America	9166890	13/634335	Sep 12, 2012	Issued
Empire Technology Development LLC	Republic of Korea	10-1603928	10-2014-7020554	Feb 6, 2012	Issued
Empire Technology Development LLC	Japan	6019139	2014-556518	Feb 6, 2012	Issued
Empire Technology Development LLC	United States of America	9710969	13/878180	Apr 5, 2013	Issued
Empire Technology Development LLC	Republic of Korea	10-1730473	10-2015-7007938	Aug 27, 2012	Issued
Empire Technology Development LLC	European Patent Office		12883785.3	Aug 27, 2012	Published
Empire Technology Development LLC	United States of America		15/651,904	Jul 17, 2017	Published

Empire Technology Development LLC	Japan	2017-113075	Aug 27, 2012	Published
Empire Technology Development LLC	United States of America	13/884,116	May 8, 2013	Marked for Impairing
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Empire Technology Development LLC	Republic of Korea	10-1659369 10-2015-7004898	Jul 31, 2012	Issued
Empire Technology Development LLC	United States of America	9054917 13/520464	Jul 3, 2012	Issued
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Empire Technology Development LLC	United States of America	9390257 13/640307	Oct 9, 2012	Issued
Empire Technology Development LLC	Republic of Korea	10-1668171 10-2014-7027924	Apr 4, 2012	Issued
Empire Technology Development LLC	China	ZL201280072222.3 201280072222.3	Apr 4, 2012	Issued
Empire Technology Development LLC	United States of America	8779070 13/761512	Feb 7, 2013	Issued
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Empire Technology Development LLC	Republic of Korea	10-1558909 10-2014-7022556	Jan 19, 2012	Issued
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Empire Technology Development LLC	United States of America	8990788 13/521578	Jul 11, 2012	Issued
Empire Technology Development LLC	United States of America	9552295 13/880194	Apr 18, 2013	Issued
Empire Technology Development LLC	United States of America	13/879,544	Dec 6, 2014	Published
Empire Technology Development LLC	United States of America	9114423 13/809543	Jan 10, 2013	Issued
Empire Technology Development LLC	United States of America	9156702 13/809049	Jan 8, 2013	Issued
Empire Technology Development LLC	United States of America	14/857,316	Sep 17, 2015	Marked for Impairing
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Empire Technology Development LLC	United States of America	9471381 14/657716	Mar 13, 2015	Issued
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Empire Technology Development LLC	United States of America	13/985,523	Aug 14, 2013	Marked for Impairing
Empire Technology Development LLC	United States of America	9291607 13/879751	Apr 16, 2013	Issued
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Empire Technology Development LLC	United States of America	9545256	14/729368	Jun 3, 2015	Issued
Empire Technology Development LLC	France	2846709	13787961.5	May 8, 2013	Issued
Empire Technology Development LLC	Germany	2846709	602013036961.5	May 8, 2013	Issued
Empire Technology Development LLC	United Kingdom	2846709	13787961.5	May 8, 2013	Issued
Empire Technology Development LLC	United States of America	9405899	13/583706	Sep 10, 2012	Issued
Empire Technology Development LLC	Republic of Korea	10-1657191	10-2015-7000257	Jun 6, 2012	Issued
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Empire Technology Development LLC	United States of America	9376614	13/878531	Apr 9, 2013	Issued
Empire Technology Development LLC	United States of America	9988517	13/879700	Dec 6, 2014	Issued
Empire Technology Development LLC	China	ZL201280073770.8	201280073770.8	Jun 5, 2012	Issued
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Empire Technology Development LLC	Germany	2855540	12878222.4	Jun 5, 2012	Issued
Empire Technology Development LLC	France	2855540	12878222.4	Jun 5, 2012	Issued
Empire Technology Development LLC	United Kingdom	2855540	12878222.4	Jun 5, 2012	Issued
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Empire Technology Development LLC	United States of America	15/152,159		May 11, 2016	Published
Empire Technology Development LLC	United States of America	9242298	13/789010	Mar 7, 2013	Issued
Empire Technology Development LLC	United States of America	9158689	13/982607	Jul 30, 2013	Issued
Empire Technology Development LLC	China	ZL201380072761.1	201380072761.1	Feb 11, 2013	Issued
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Empire Technology Development LLC	United States of America	9126922	13/430090	Mar 26, 2012	Issued
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Empire Technology Development LLC	United States of America	9544028	14/764696	Jul 30, 2015	Issued
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Empire Technology Development LLC	United States of America	8859735	13/885306	May 14, 2013	Issued
Empire Technology Development LLC	United States of America	8933660	13/810279	Jan 15, 2013	Issued
Empire Technology Development LLC	United States of America	8698096	13/879723	Apr 16, 2013	Issued
Empire Technology Development LLC	China	ZL201280076469.2	201280076469.2	Aug 16, 2012	Issued
Empire Technology Development LLC	United States of America	9275696	13/812967	Jan 29, 2013	Issued
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Empire Technology Development LLC	United Kingdom	2846703	13786982.2	May 8, 2013	Issued
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Empire Technology Development LLC	European Patent Office		12880527.2	Jul 3, 2012	Published
Empire Technology Development LLC	United States of America	9238712	13/827155	Mar 14, 2013	Issued
Empire Technology Development LLC	United States of America	8946364	13/817008	Feb 14, 2013	Issued
Empire Technology Development LLC	United States of America	9204807	14/006801	Sep 23, 2013	Issued
Empire Technology Development LLC	United States of America	9473426	14/005520	Sep 16, 2013	Issued
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Empire Technology Development LLC	China	ZL 201380074889.1	201380074889.1	Mar 20, 2013	Issued
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Empire Technology Development LLC	Taiwan R.O.C.	1521317	103104420	Feb 11, 2014	Issued
Empire Technology Development LLC	United States of America	9990212	14/360657	May 27, 2014	Issued
Empire Technology Development LLC	China	ZL 2013800733190	201380073319.0	Feb 19, 2013	Issued

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Empire Technology Development LLC	China	ZL201280072737.3	Apr 25, 2012	Issued
Empire Technology Development LLC	United States of America	9759700 14/005232	Sep 13, 2013	Issued
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Empire Technology Development LLC	Republic of Korea	10-1629596 10-2014-7028141	Apr 19, 2012	Issued
Empire Technology Development LLC	China	ZL201280072529.3	Apr 19, 2012	Issued
Empire Technology Development LLC	United States of America	9311316 14/488453	Sep 17, 2014	Issued
Empire Technology Development LLC	Australia	2013200526 2013200526	Feb 1, 2013	Issued
Empire Technology Development LLC	United States of America	9239137 13/876473	Mar 27, 2013	Issued
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Empire Technology Development LLC	United States of America	8668353 13/940017	Jul 11, 2013	Issued
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Empire Technology Development LLC	Republic of Korea	10-1587959 10-2014-7036969	Jun 5, 2012	Issued
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Empire Technology Development LLC	United States of America	9482639 14/768532	Aug 18, 2015	Issued
Empire Technology Development LLC	United States of America	9945793 15/289714	Oct 10, 2016	Issued
Empire Technology Development LLC	United States of America	9619265 14/233848	Jan 20, 2014	Issued
Empire Technology Development LLC	China	201380077736.2	Jun 25, 2013	Published
Empire Technology Development LLC	United States of America	8803187 13/830068	Mar 14, 2013	Issued
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Empire Technology Development LLC	United States of America	8961682 13/813715	Feb 1, 2013	Issued
Empire Technology Development LLC	United States of America	9193874 13/700683	Nov 28, 2012	Issued
Empire Technology Development LLC	United States of America	9701863 14/919296	Oct 21, 2015	Issued
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Empire Technology Development LLC	United States of America	9255907 14/363049	Jun 5, 2014	Issued
Empire Technology Development LLC	United States of America	8859637 13/877413	Apr 2, 2013	Issued
Empire Technology Development LLC	China	201480073704.X	Jan 21, 2014	Published
Empire Technology Development LLC	United States of America	8997179 13/816717	Feb 12, 2013	Issued
Empire Technology Development LLC	China	201280076055X 201280076055.X	Sep 26, 2012	Issued
Empire Technology Development LLC	United States of America	10145815 15/027170	Apr 4, 2016	Issued
Empire Technology Development LLC	China	201380080104.1	Oct 7, 2013	Published

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Empire Technology Development LLC	China	ZL 201280076661.1	Oct 25, 2012	Issued
Empire Technology Development LLC	Taiwan R.O.C.	1518534	Dec 27, 2013	Issued
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Empire Technology Development LLC	China	ZL201380069631.2	Jan 6, 2013	Issued
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Empire Technology Development LLC	United States of America	9390122 14/796259	Jul 10, 2015	Issued
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Empire Technology Development LLC	United States of America	9266020 13/876160	Mar 26, 2013	Issued
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Empire Technology Development LLC	United States of America	9278318 13/995339	Jun 18, 2013	Issued
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Empire Technology Development LLC	United States of America	9241780 14/112036	Oct 16, 2013	Issued
Empire Technology Development LLC	United States of America	14/769,778	Aug 21, 2015	Marked for Impairing
Empire Technology Development LLC	Taiwan R.O.C.	1624430	Apr 14, 2014	Issued
Empire Technology Development LLC	United States of America	10014475 14/785323	Oct 17, 2015	Issued

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Empire Technology Development LLC	Republic of Korea	10-1639958	10-2015-7000281	Jul 10, 2012	Issued
Empire Technology Development LLC	United States of America		13/642,775	Oct 22, 2012	Published
Empire Technology Development LLC	Japan	6033417	2015-515995	Jun 11, 2012	Issued
Empire Technology Development LLC	United States of America		9525588 13/810496	Jan 16, 2013	Issued
Empire Technology Development LLC	Republic of Korea	10-1621791	10-2015-7006642	Aug 14, 2012	Issued
Empire Technology Development LLC	United States of America		10154022 15/361622	Nov 28, 2016	Issued
Empire Technology Development LLC	United States of America		9051479 13/879941	Apr 17, 2013	Issued
Empire Technology Development LLC	Republic of Korea	10-1687925	10-2015-7000192	Jul 3, 2012	Issued
Empire Technology Development LLC	United States of America		13/643,041	Oct 23, 2012	Published
Empire Technology Development LLC	United States of America		9282153 13/816102	Feb 8, 2013	Issued
Empire Technology Development LLC	Republic of Korea	10-1648318	10-2015-7000286	Jul 19, 2012	Issued
Empire Technology Development LLC	United States of America		9954964 15/002695	Jan 21, 2016	Issued
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Empire Technology Development LLC	United States of America		14/909,419	Feb 1, 2016	Published
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Empire Technology Development LLC	China	ZL201280034446.5	201280034446.5	Aug 3, 2012	Issued
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Empire Technology Development LLC	France	2740229	12820278.5	Aug 3, 2012	Issued
Empire Technology Development LLC	United Kingdom	2740229	12820278.5	Aug 3, 2012	Issued
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Empire Technology Development LLC	China	ZL201280074125.8	201280074125.8	Jun 19, 2012	Issued
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Empire Technology Development LLC	United States of America	9965385 15/268226	Sep 16, 2016	Issued
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Empire Technology Development LLC	United States of America	13/876,163	Mar 26, 2013	Published
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Empire Technology Development LLC	United States of America	14/910,874	Feb 8, 2016	Published
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Empire Technology Development LLC	United States of America	ZL201280075765.0 201280075765.0	Sep 12, 2012	Issued
Empire Technology Development LLC	China	9713480 14/356391	May 5, 2014	Issued
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Empire Technology Development LLC	United States of America	9101840 13/878126	Apr 5, 2013	Issued

Empire Technology Development LLC	United States of America	9364763	14/739443	Jun 15, 2015	Issued
Empire Technology Development LLC	Taiwan R.O.C.	1556980	103102966	Jan 27, 2014	Issued
Empire Technology Development LLC	United States of America	9707583	14/766971	Aug 10, 2015	Issued
Empire Technology Development LLC	United States of America	9612961	14/363792	Jun 7, 2014	Issued
Empire Technology Development LLC	China		201380079176.4	Aug 29, 2013	Published
Empire Technology Development LLC	United States of America	15/474,577		Mar 30, 2017	Published
Empire Technology Development LLC	United States of America	13/885,996		May 16, 2013	Marked for Impairing
Empire Technology Development LLC	United States of America	9043923	13/885160	May 13, 2013	Issued
Empire Technology Development LLC	United States of America	9436814	14/426157	Mar 4, 2015	Issued
Empire Technology Development LLC	Republic of Korea	10-1731934	10-2015-7022931	Jan 22, 2013	Issued
Empire Technology Development LLC	United States of America	9361446	13/994882	Jun 17, 2013	Issued
Empire Technology Development LLC	United States of America	9760244	14/009095	Sep 30, 2013	Issued
Empire Technology Development LLC	United States of America	9498315	14/031056	Sep 19, 2013	Issued
Empire Technology Development LLC	United States of America	14/769,818		Aug 23, 2015	Marked for Impairing
Empire Technology Development LLC	United States of America	9602576	14/350038	Apr 4, 2014	Issued
Empire Technology Development LLC	United States of America	15/463,862		Mar 20, 2017	Published
Empire Technology Development LLC	United States of America	14/406,147		Dec 5, 2014	Marked for Impairing
Empire Technology Development LLC	China	201380078867.2		Aug 15, 2013	Allowed
Empire Technology Development LLC	Taiwan R.O.C.	1509448	103127247	Aug 8, 2014	Issued
Empire Technology Development LLC	United States of America	9411922	14/414452	Jan 13, 2015	Issued
Empire Technology Development LLC	United States of America	9304795	13/977670	Jun 28, 2013	Issued
Empire Technology Development LLC	China		201380070466.2	Jan 15, 2013	Published
Empire Technology Development LLC	United States of America	9237133	13/876766	Mar 28, 2013	Issued
Empire Technology Development LLC	United States of America	9304790	13/978877	Jul 9, 2013	Issued
Empire Technology Development LLC	China	ZL 2013800719687	201380071968.7	Jan 31, 2013	Issued
Empire Technology Development LLC	United States of America	9021509	14/114524	Oct 28, 2013	Issued
Empire Technology Development LLC	United States of America	9648123	13/988417	May 20, 2013	Issued
Empire Technology Development LLC	Republic of Korea	10-1717455	10-2015-7014292	Dec 17, 2012	Issued
Empire Technology Development LLC	China	201380079281.8		Sep 5, 2013	Issued
Empire Technology Development LLC	United States of America	14/916,743		Mar 4, 2016	Published
Empire Technology Development LLC	European Patent Office	13892965.8		Sep 5, 2013	Published
Empire Technology Development LLC	China	201380080723.0		Sep 12, 2013	Allowed
Empire Technology Development LLC	Japan	6247398	2016-541943	Sep 12, 2013	Issued
Empire Technology Development LLC	United States of America	14/400,557		Nov 12, 2014	Published
Empire Technology Development LLC	United States of America	9298502	14/110132	Oct 4, 2013	Issued
Empire Technology Development LLC	United States of America	9493670	14/785477	Oct 19, 2015	Issued

Empire Technology Development LLC	United States of America	10023758	14/906540	Jan 20, 2016	Issued
Empire Technology Development LLC	United States of America	9154191	13/980041	Jul 16, 2013	Issued
Empire Technology Development LLC	United States of America	9432088	14/840612	Aug 31, 2015	Issued
Empire Technology Development LLC	United States of America	9564202	14/371180	Jul 9, 2014	Issued
Empire Technology Development LLC	China	2013800793007	201380079300.7	Sep 1, 2013	Issued
Empire Technology Development LLC	China		201811134120	Sep 1, 2013	Pending
Empire Technology Development LLC	United States of America	15/401,114		Jan 9, 2017	Published
Empire Technology Development LLC	United States of America	9405666	14/342333	Feb 28, 2014	Issued
Empire Technology Development LLC	United States of America	14/769,806		Aug 22, 2015	Marked for Impairing
Empire Technology Development LLC	United States of America	14/234,380		Jul 12, 2014	Published
Empire Technology Development LLC	United States of America	9699058	14/238457	Feb 11, 2014	Issued
Empire Technology Development LLC	United States of America	9867168	14/783309	Oct 8, 2015	Issued
Empire Technology Development LLC	European Patent Office	13883726.5		Apr 30, 2013	Published
Empire Technology Development LLC	United States of America	15/863,003		Jan 5, 2018	Published
Empire Technology Development LLC	United States of America	9603012	14/390383	Oct 2, 2014	Issued
Empire Technology Development LLC	Republic of Korea	10-1820323	10-2016-7006807	Aug 19, 2013	Issued
Empire Technology Development LLC	United States of America	14/763,161		Jul 23, 2015	Marked for Impairing
Empire Technology Development LLC	United States of America	14/894,999		Dec 1, 2015	Marked for Impairing
Empire Technology Development LLC	China	201380077232.0		Jun 6, 2013	Allowed
Empire Technology Development LLC	United States of America	9356956	14/356150	May 3, 2014	Issued
Empire Technology Development LLC	United States of America	14/351,508		Apr 11, 2014	Marked for Impairing
Empire Technology Development LLC	United States of America	9747185	13/850671	Mar 26, 2013	Issued
Empire Technology Development LLC	United States of America	10-1478567	10-2013-0054528	May 14, 2013	Issued
Empire Technology Development LLC	Republic of Korea	5840716	2014-062866	Mar 26, 2014	Issued
Empire Technology Development LLC	Japan	9585618	14/237084	Feb 4, 2014	Issued
Empire Technology Development LLC	United States of America	ZL201380078719.0	201380078719.0	Aug 5, 2013	Issued
Empire Technology Development LLC	China	14/910,640		Feb 5, 2016	Published
Empire Technology Development LLC	United States of America	9859925	14/785582	Oct 19, 2015	Issued
Empire Technology Development LLC	United States of America	9515902	14/114732	Oct 29, 2013	Issued
Empire Technology Development LLC	China	201380073223.4		Apr 17, 2013	Published
Empire Technology Development LLC	United States of America	9597091	14/118626	Nov 19, 2013	Issued
Empire Technology Development LLC	United States of America	9311153	14/124569	Dec 6, 2013	Issued
Empire Technology Development LLC	China	2013800765806	201380076580.6	May 15, 2013	Issued
Empire Technology Development LLC	United States of America	9288206	14/358146	May 14, 2014	Issued
Empire Technology Development LLC	Republic of Korea	10-1812397	10-2015-7034704	Jun 4, 2013	Issued
Empire Technology Development LLC	United States of America	14/344,795		Mar 13, 2014	Marked for Impairing

Empire Technology Development LLC	United States of America	9354855	14/351829	Apr 14, 2014	Issued
Empire Technology Development LLC	United States of America	9792062	14/348143	Mar 28, 2014	Issued
Empire Technology Development LLC	Republic of Korea	10-1753866	10-2015-7035111	May 10, 2013	Issued
Empire Technology Development LLC	China	201380076472.9		May 10, 2013	Published
Empire Technology Development LLC	United States of America	9988491	15/031687	Apr 22, 2016	Issued
Empire Technology Development LLC	European Patent Office	13895980.4		Oct 22, 2013	Marked for Impairing
Empire Technology Development LLC	United States of America	8954993	14/009101	Sep 30, 2013	Issued
Empire Technology Development LLC	United States of America	9479472	14/575809	Dec 18, 2014	Issued
Empire Technology Development LLC	United States of America	9367370	14/468238	Aug 25, 2014	Issued
Empire Technology Development LLC	United States of America	9565075	14/373026	Jul 17, 2014	Issued
Empire Technology Development LLC	United States of America	15/402,389		Jan 10, 2017	Published
Empire Technology Development LLC	China	ZL201380073510.5	201380073510.5	Feb 21, 2013	Issued
Empire Technology Development LLC	United States of America	14/769,753		Aug 21, 2015	Marked for Impairing
Empire Technology Development LLC	United States of America	14/892,525		Nov 19, 2015	Published
Empire Technology Development LLC	United States of America	9274822	14/238470	Feb 11, 2014	Issued
Empire Technology Development LLC	United States of America	10067792	15/104125	Jun 13, 2016	Issued
Empire Technology Development LLC	United States of America	9079108	14/119171	Nov 20, 2013	Issued
Empire Technology Development LLC	United States of America	9358466	14/728645	Jun 2, 2015	Issued
Empire Technology Development LLC	China	ZL201380077113.5	201380077113.5	May 31, 2013	Issued
Empire Technology Development LLC	United States of America	9990293	14/457128	Aug 12, 2014	Issued
Empire Technology Development LLC	United States of America	9648134	14/003770	Sep 6, 2013	Issued
Empire Technology Development LLC	United States of America	9982094	15/031701	Apr 22, 2016	Issued
Empire Technology Development LLC	China	201380080411X	201380080411.X	Oct 22, 2013	Issued
Empire Technology Development LLC	European Patent Office	13896041.4		Oct 22, 2013	Marked for Impairing
Empire Technology Development LLC	United States of America	15/300,272		Sep 28, 2016	Allowed
Empire Technology Development LLC	Republic of Korea	10-2016-7029564		Mar 29, 2014	Allowed
Empire Technology Development LLC	China	201480077643.4		Mar 29, 2014	Published
Empire Technology Development LLC	United States of America	9836625	14/364076	Jun 10, 2014	Issued
Empire Technology Development LLC	Republic of Korea	10-2016-7018875		Dec 19, 2013	Allowed
Empire Technology Development LLC	United States of America	10037653	14/376816	Aug 5, 2014	Issued
Empire Technology Development LLC	United States of America	9137011	14/127969	Dec 19, 2013	Issued
Empire Technology Development LLC	United States of America	9621521	14/796238	Jul 10, 2015	Issued
Empire Technology Development LLC	European Patent Office	13886984.7		Jun 13, 2013	Marked for Impairing
Empire Technology Development LLC	United States of America	14/898,369		Dec 14, 2015	Marked for Impairing
Empire Technology Development LLC	United States of America	9489774	14/235958	Jan 29, 2014	Issued
Empire Technology Development LLC	United States of America	9680864	14/238542	Feb 12, 2014	Issued

Empire Technology Development LLC	United States of America	9823539	14/901676	Dec 28, 2015	Issued
Empire Technology Development LLC	United States of America		14/783,472	Oct 9, 2015	Published
Empire Technology Development LLC	China		201380076779.9	May 30, 2013	Published
Empire Technology Development LLC	United States of America	10042621	14/379630	Aug 19, 2014	Issued
Empire Technology Development LLC	China		201380078341.4	Aug 8, 2013	Published
Empire Technology Development LLC	United States of America	9306963	14/352655	Apr 17, 2014	Issued
Empire Technology Development LLC	United States of America	9853989	15/017982	Feb 8, 2016	Issued
Empire Technology Development LLC	United States of America		14/350,771	Aug 7, 2014	Allowed
Empire Technology Development LLC	United States of America	9389663	14/386300	Sep 18, 2014	Issued
Empire Technology Development LLC	China		201480073940.1	Jan 22, 2014	Published
Empire Technology Development LLC	United States of America	9766681	14/306406	Jun 17, 2014	Issued
Empire Technology Development LLC	United States of America	9760691	14/647079	May 22, 2015	Issued
Empire Technology Development LLC	United States of America	9549036	14/376133	Jul 31, 2014	Issued
Empire Technology Development LLC	United States of America	9374707	14/372008	Jul 11, 2014	Issued
Empire Technology Development LLC	Republic of Korea	10-1824895	10-2016-7013897	Oct 25, 2013	Issued
Empire Technology Development LLC	United States of America		15/035,472	May 9, 2016	Marked for Impairing
Empire Technology Development LLC	United States of America	9424060	14/239970	Feb 20, 2014	Issued
Empire Technology Development LLC	United States of America	9896633	14/414382	Jan 12, 2015	Issued
Empire Technology Development LLC	China	ZL201380078393.1	201380078393.1	Jul 23, 2013	Issued
Empire Technology Development LLC	United States of America		15/024,888	Mar 25, 2016	Marked for Impairing
Empire Technology Development LLC	United States of America		15/107,607	Jun 23, 2016	Published
Empire Technology Development LLC	Taiwan R.O.C.	1535649	103115944	May 5, 2014	Issued
Empire Technology Development LLC	United States of America	9765178	14/899123	Dec 17, 2015	Issued
Empire Technology Development LLC	United States of America		15/123,985	Sep 6, 2016	Published
Empire Technology Development LLC	United States of America		14/907,285	Jan 24, 2016	Published
Empire Technology Development LLC	China		201380078825.9	Jul 23, 2013	Published
Empire Technology Development LLC	United States of America	9432720	14/380698	Aug 22, 2014	Issued
Empire Technology Development LLC	United States of America	9854294	15/197767	Jun 30, 2016	Issued
Empire Technology Development LLC	United States of America	9710291	14/241052	Aug 7, 2014	Issued
Empire Technology Development LLC	United States of America		14/379,492	Aug 18, 2014	Marked for Impairing
Empire Technology Development LLC	United States of America		14/594,253	Jan 12, 2015	Published
Empire Technology Development LLC	United States of America	10131610	15/032045	Apr 25, 2016	Issued
Empire Technology Development LLC	United States of America	9965310	14/906752	Jan 21, 2016	Issued
Empire Technology Development LLC	China		201480076447.5	Mar 10, 2014	Marked for Impairing
Empire Technology Development LLC	United States of America	9982093	15/125571	Sep 12, 2016	Issued
Empire Technology Development LLC	United States of America	9501137	14/373897	Jul 22, 2014	Issued

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Empire Technology Development LLC	United States of America	9531813 14/380372	Aug 21, 2014	Issued
Empire Technology Development LLC	China	201380081397.5	Dec 4, 2013	Allowed
Empire Technology Development LLC	United States of America	9438624 14/384677	Sep 11, 2014	Issued
Empire Technology Development LLC	Republic of Korea	10-2016-7011581	Dec 4, 2013	Issued
Empire Technology Development LLC	United States of America	15/867,211	Jan 10, 2018	Published
Empire Technology Development LLC	China	ZL201380081399.4	Dec 5, 2013	Issued
Empire Technology Development LLC	United States of America	9195490 14/347894	Mar 27, 2014	Issued
Empire Technology Development LLC	United States of America	9792135 14/887902	Oct 20, 2015	Issued
Empire Technology Development LLC	United States of America	15/633,235	Jun 26, 2017	Marked for Impairing
Empire Technology Development LLC	United States of America	9692833 14/359247	May 19, 2014	Issued
Empire Technology Development LLC	Republic of Korea	10-1781311	Jul 26, 2013	Issued
Empire Technology Development LLC	European Patent Office	13889955.4	Jul 26, 2013	Marked for Impairing
Empire Technology Development LLC	United States of America	9930114 14/526434	Oct 28, 2014	Issued
Empire Technology Development LLC	United States of America	9760390 14/351070	Apr 10, 2014	Issued
Empire Technology Development LLC	United States of America	9805813 14/649505	Jun 3, 2015	Issued
Empire Technology Development LLC	China	201380079234.3	Aug 30, 2013	Published
Empire Technology Development LLC	United States of America	15/128,895	Sep 23, 2016	Published
Empire Technology Development LLC	China	201480077865.6	Apr 4, 2014	Published
Empire Technology Development LLC	European Patent Office	14888153.5	Apr 4, 2014	Published
Empire Technology Development LLC	United States of America	9632832 14/758404	Jun 29, 2015	Issued
Empire Technology Development LLC	European Patent Office	14884199.2	Feb 27, 2014	Published
Empire Technology Development LLC	United States of America	15/495,126	Apr 24, 2017	Published
Empire Technology Development LLC	United States of America	9203798 14/118992	Nov 20, 2013	Issued
Empire Technology Development LLC	United States of America	15/110,699	Jul 8, 2016	Allowed
Empire Technology Development LLC	United States of America	9678550 14/337748	Jul 22, 2014	Issued
Empire Technology Development LLC	China	201510434413.5	Jul 22, 2015	Issued
Empire Technology Development LLC	United States of America	9419993 14/380371	Aug 21, 2014	Issued
Empire Technology Development LLC	United States of America	9466731 14/457960	Aug 12, 2014	Issued
Empire Technology Development LLC	United States of America	9997640 15/252250	Aug 31, 2016	Issued
Empire Technology Development LLC	China	201510388378.8	Jul 3, 2015	Published
Empire Technology Development LLC	United States of America	9508685 14/445991	Jul 29, 2014	Issued
Empire Technology Development LLC	United States of America	9812428 15/299483	Oct 21, 2016	Issued
Empire Technology Development LLC	United States of America	9484328 14/450203	Aug 1, 2014	Issued
Empire Technology Development LLC	United States of America	9124337 14/128201	Dec 20, 2013	Issued
Empire Technology Development LLC	United States of America	9350439 14/812664	Jul 29, 2015	Issued

Empire Technology Development LLC	China	201380079175.X	Aug 30, 2013	Published
Empire Technology Development LLC	United States of America	10140639 14/373625	Jul 21, 2014	Issued
Empire Technology Development LLC	United States of America	16/198,482	Nov 21, 2018	Pending
Empire Technology Development LLC	United States of America	9994677 15/125576	Sep 12, 2016	Issued
Empire Technology Development LLC	China	201480076348.7	Mar 11, 2014	Published
Empire Technology Development LLC	United States of America	14/370,436	Jul 2, 2014	Allowed
Empire Technology Development LLC	United States of America	9619168 14/376125	Jul 31, 2014	Issued
Empire Technology Development LLC	United States of America	9237165 14/371730	Jul 10, 2014	Issued
Empire Technology Development LLC	China	201380080805.5	Nov 6, 2013	Published
Empire Technology Development LLC	United States of America	15/495,517	Apr 24, 2017	Allowed
Empire Technology Development LLC	United States of America	9630110 14/353238	Apr 21, 2014	Issued
Empire Technology Development LLC	China	201380079766.7	Sep 23, 2013	Published
Empire Technology Development LLC	United States of America	9761051 14/362583	Jun 3, 2014	Issued
Empire Technology Development LLC	United States of America	15/120,446	Aug 19, 2016	Marked for Impairing
Empire Technology Development LLC	United States of America	9671973 14/651091	Jun 10, 2015	Issued
Empire Technology Development LLC	United States of America	15/612,452	Jun 2, 2017	Published
Empire Technology Development LLC	United States of America	15/483,740	Apr 10, 2017	Allowed
Empire Technology Development LLC	United States of America	9619857 14/360288	May 22, 2014	Issued
Empire Technology Development LLC	United States of America	9237274 14/364017	Jun 9, 2014	Issued
Empire Technology Development LLC	China	201480074706.0	Feb 7, 2014	Allowed
Empire Technology Development LLC	United States of America	10059591 15/117332	Aug 8, 2016	Issued
Empire Technology Development LLC	United States of America	9811526 14/372407	Jul 15, 2014	Issued
Empire Technology Development LLC	United States of America	9391771 14/390368	Oct 2, 2014	Issued
Empire Technology Development LLC	United States of America	9784692 14/372439	Jul 15, 2014	Issued
Empire Technology Development LLC	Republic of Korea	10-1864135 10-2016-7023230	Feb 7, 2014	Issued
Empire Technology Development LLC	United States of America	15/306,004	Oct 21, 2016	Published
Empire Technology Development LLC	United States of America	9946647 15/306021	Oct 21, 2016	Issued
Empire Technology Development LLC	United States of America	9406750 14/548264	Nov 19, 2014	Issued
Empire Technology Development LLC	United States of America	9524960 14/761599	Jul 16, 2015	Issued
Empire Technology Development LLC	China	201480078416.3	Apr 1, 2014	Published
Empire Technology Development LLC	United States of America	9813406 14/370637	Jul 3, 2014	Issued
Empire Technology Development LLC	United States of America	9646178 14/515425	Oct 15, 2014	Issued
Empire Technology Development LLC	China	201510666276.8	Oct 15, 2015	Issued
Empire Technology Development LLC	Republic of Korea	10-2015-0143539	Oct 14, 2015	Issued
Empire Technology Development LLC	United States of America	15/494,109	Apr 21, 2017	Published
Empire Technology Development LLC	United States of America	9684603 14/603277	Jan 22, 2015	Issued

Empire Technology Development LLC	United States of America	9396564	14/413414	Jan 7, 2015	Issued
Empire Technology Development LLC	United States of America	9312382	14/338217	Jul 22, 2014	Issued
Empire Technology Development LLC	United States of America	15/112,131		Jul 15, 2016	Allowed
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Empire Technology Development LLC	United States of America	9934862	15/424065	May 22, 2015	Issued
Empire Technology Development LLC	United States of America	9607409	14/373829	Feb 3, 2017	Issued
Empire Technology Development LLC	United States of America	10013809	15/470073	Jul 22, 2014	Issued
Empire Technology Development LLC	United States of America	9773293	14/375296	Mar 27, 2017	Issued
Empire Technology Development LLC	United States of America	10152410	14/442093	Jul 29, 2014	Issued
Empire Technology Development LLC	United States of America	14/758,812		May 11, 2015	Issued
Empire Technology Development LLC	United States of America	15/125,523		Jul 1, 2015	Published
Empire Technology Development LLC	United States of America	9202558	14/457479	Sep 12, 2016	Marked for Impairing
Empire Technology Development LLC	United States of America	201610045992.9		Aug 12, 2014	Issued
Empire Technology Development LLC	China	9418231	14/295286	Jan 22, 2016	Published
Empire Technology Development LLC	China	ZL2015103002592	201510300259.2	Jun 3, 2014	Issued
Empire Technology Development LLC	United States of America	9772935	14/488125	Jun 3, 2015	Issued
Empire Technology Development LLC	United States of America	9983991	15/712475	Sep 16, 2014	Issued
Empire Technology Development LLC	China	201580050129.6		Sep 22, 2017	Issued
Empire Technology Development LLC	United States of America	14/291,124		Aug 11, 2015	Published
Empire Technology Development LLC	China	201610157246.9		May 30, 2014	Marked for Impairing
Empire Technology Development LLC	United States of America	10109852	14/666058	Mar 18, 2016	Allowed
Empire Technology Development LLC	United States of America	9575250	14/324074	Mar 23, 2015	Issued
Empire Technology Development LLC	China	201510922695.3		Jul 3, 2014	Issued
Empire Technology Development LLC	European Patent Office	15202952.6		Dec 14, 2015	Published
Empire Technology Development LLC	United States of America	9281065	14/456965	Dec 29, 2015	Published
Empire Technology Development LLC	United States of America	10040777	14/316527	Aug 11, 2014	Issued
Empire Technology Development LLC	United States of America	9858179	14/430891	Jun 26, 2014	Issued
Empire Technology Development LLC	United States of America	9779463	14/380908	Mar 24, 2015	Issued
Empire Technology Development LLC	China	201480070775.4		Aug 25, 2014	Issued
Empire Technology Development LLC	United States of America	9501350	14/492186	Oct 23, 2013	Published
Empire Technology Development LLC	United States of America	9876562	14/760951	Sep 22, 2014	Issued
Empire Technology Development LLC	United States of America	9195762	14/383720	Jul 14, 2015	Issued
Empire Technology Development LLC	United States of America	9411894	14/873401	Sep 8, 2014	Issued
Empire Technology Development LLC	Republic of Korea	10-1890502	10-2016-7027140	Oct 2, 2015	Issued
Empire Technology Development LLC	United States of America	15/107,927		Apr 8, 2014	Issued
Empire Technology Development LLC	United States of America			Jun 24, 2016	Allowed

Empire Technology Development LLC	European Patent Office	3131735	14889450.4	Apr 15, 2014	Issued
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Empire Technology Development LLC	Germany	3131735	14889450.4	Apr 15, 2014	Issued
Empire Technology Development LLC	United Kingdom	3131735	14889450.4	Apr 15, 2014	Issued
Empire Technology Development LLC	China	2014800760421	201480076042.1	Feb 24, 2014	Issued
Empire Technology Development LLC	United States of America		15/109,833	Jul 6, 2016	Published
Empire Technology Development LLC	United States of America		9769395 14/421101	Feb 11, 2015	Issued
Empire Technology Development LLC	United States of America		15/123,144	Sep 1, 2016	Marked for Impairing
Empire Technology Development LLC	United States of America		9851796 14/482958	Sep 10, 2014	Issued
Empire Technology Development LLC	China	ZL201510571928X	201510571928.X	Sep 9, 2015	Issued
Empire Technology Development LLC	United States of America		9586371 14/475360	Sep 2, 2014	Issued
Empire Technology Development LLC	United States of America		10144152 15/508416	Mar 2, 2017	Issued
Empire Technology Development LLC	United States of America		15/309,393	Nov 7, 2016	Published
Empire Technology Development LLC	United States of America		9575534 14/391640	Oct 9, 2014	Issued
Empire Technology Development LLC	United States of America		15/436,078	Feb 17, 2017	Published
Empire Technology Development LLC	United States of America		9786297 14/420858	Feb 10, 2015	Issued
Empire Technology Development LLC	United States of America		15/729,126	Oct 10, 2017	Published
Empire Technology Development LLC	United States of America		14/329,795	Jul 11, 2014	Marked for Impairing
Empire Technology Development LLC	United States of America		9406152 14/334465	Jul 17, 2014	Issued
Empire Technology Development LLC	United States of America		15/106,851	Jun 21, 2016	Published
Empire Technology Development LLC	United States of America		10005235 14/479817	Sep 8, 2014	Issued
Empire Technology Development LLC	United States of America		14/649,894	Jun 4, 2015	Marked for Impairing
Empire Technology Development LLC	United States of America		9783647 14/282055	May 20, 2014	Issued
Empire Technology Development LLC	United States of America		9635529 14/297450	Jun 5, 2014	Issued
Empire Technology Development LLC	United States of America		9563620 14/293363	Jun 2, 2014	Issued
Empire Technology Development LLC	United States of America		10084343 14/304653	Jun 13, 2014	Issued
Empire Technology Development LLC	China	201510328894.1	201510328894.1	Jun 15, 2015	Issued
Empire Technology Development LLC	China	201510328894.1	2018109486013	Jun 15, 2015	Pending
Empire Technology Development LLC	United States of America		16/111,577	Aug 24, 2018	Pending
Empire Technology Development LLC	United States of America		9858111 14/308262	Jun 18, 2014	Issued
Empire Technology Development LLC	United States of America		14/413,418	Jan 8, 2015	Marked for Impairing
Empire Technology Development LLC	United States of America		9747035 14/573259	Dec 17, 2014	Issued
Empire Technology Development LLC	United States of America		9729201 14/405084	Dec 2, 2014	Issued
Empire Technology Development LLC	United States of America		9619867 14/413223	Jan 6, 2015	Issued
Empire Technology Development LLC	United States of America		9760912 14/311807	Jun 23, 2014	Issued
Empire Technology Development LLC	United States of America		15/700,907	Sep 11, 2017	Published

Empire Technology Development LLC	United States of America	9824750 14/630644	Feb 24, 2015	Issued
Empire Technology Development LLC	United States of America	9369477 14/290883	May 29, 2014	Issued
Empire Technology Development LLC	United States of America	10069324 14/480007	Sep 8, 2014	Issued
Empire Technology Development LLC	China	ZL201510680693.8 201510680693.8	Sep 8, 2015	Issued
Empire Technology Development LLC	United States of America	16/101,285	Aug 10, 2018	Published
Empire Technology Development LLC	United States of America	9944800 14/523458	Oct 24, 2014	Issued
Empire Technology Development LLC	China	2015106773065 201510677306.5	Oct 19, 2015	Issued
Empire Technology Development LLC	European Patent Office	3015513 15190759.9	Oct 21, 2015	Issued
Empire Technology Development LLC	France	3015513 15190759.9	Oct 21, 2015	Issued
Empire Technology Development LLC	United Kingdom	3015513 15190759.9	Oct 21, 2015	Issued
Empire Technology Development LLC	Germany	3015513 602015002543.1	Oct 21, 2015	Issued
Empire Technology Development LLC	United States of America	9916255 14/567278	Dec 11, 2014	Issued
Empire Technology Development LLC	United States of America	9757880 14/596078	Jan 13, 2015	Issued
Empire Technology Development LLC	United States of America	14/496,092	Sep 25, 2014	Marked for Impairing
Empire Technology Development LLC	China	ZL201510683467.5 201510683467.5	Sep 8, 2015	Issued
Empire Technology Development LLC	United States of America	14/479,909	Sep 8, 2014	Published
Empire Technology Development LLC	United States of America	9231916 14/455312	Aug 8, 2014	Issued
Empire Technology Development LLC	United States of America	9755961 14/934774	Nov 6, 2015	Issued
Empire Technology Development LLC	United States of America	14/741,328	Jun 16, 2015	Published
Empire Technology Development LLC	United States of America	9671850 14/325280	Jul 7, 2014	Issued
Empire Technology Development LLC	United States of America	9961104 14/558447	Dec 2, 2014	Issued
Empire Technology Development LLC	China	201510863278.6	Dec 1, 2015	Published
Empire Technology Development LLC	United States of America	9513990 14/494319	Sep 23, 2014	Issued
Empire Technology Development LLC	United States of America	9489739 14/458577	Aug 13, 2014	Issued
Empire Technology Development LLC	China	201510483043.4 201510483043.4	Aug 7, 2015	Issued
Empire Technology Development LLC	Republic of Korea	10-1850586 10-2015-0113317	Aug 11, 2015	Issued
Empire Technology Development LLC	Republic of Korea	10-2018-0041622	Aug 11, 2015	Pending
Empire Technology Development LLC	China	2018109515478	Aug 7, 2015	Pending
Empire Technology Development LLC	United States of America	15/286,222	Oct 5, 2016	Published
Empire Technology Development LLC	United States of America	9940458 14/454326	Aug 7, 2014	Issued
Empire Technology Development LLC	United States of America	9859034 14/665472	Mar 23, 2015	Issued
Empire Technology Development LLC	United States of America	9552228 14/479945	Sep 8, 2014	Issued
Empire Technology Development LLC	United States of America	9965309 14/665726	Mar 23, 2015	Issued
Empire Technology Development LLC	China	201610169458.9	Mar 23, 2016	Published
Empire Technology Development LLC	United States of America	14/761,935	Jul 17, 2015	Marked for Impairing
Empire Technology Development LLC	United States of America	14/614,763	Feb 5, 2015	Allowed

Empire Technology Development LLC	United States of America	14/438,223	Apr 23, 2015	Marked for Impairing
Empire Technology Development LLC	United States of America	9379841 14/431034	Mar 25, 2015	Issued
Empire Technology Development LLC	United States of America	14/437,831	Apr 22, 2015	Published
Empire Technology Development LLC	China	201480083563.X	Nov 21, 2014	Published
Empire Technology Development LLC	United States of America	14/651,191	Jun 10, 2015	Published
Empire Technology Development LLC	United States of America	14/858,979	Sep 18, 2015	Allowed
Empire Technology Development LLC	United States of America	14/858,970	Sep 18, 2015	Published
Empire Technology Development LLC	United States of America	14/859,096	Sep 18, 2015	Published
Empire Technology Development LLC	United States of America	14/859,108	Sep 18, 2015	Published
Empire Technology Development LLC	United States of America	14/858,947	Sep 18, 2015	Published
Empire Technology Development LLC	United States of America	14/761,253	Jul 15, 2015	Published
Empire Technology Development LLC	United States of America	14/787,322	Oct 27, 2015	Published
Empire Technology Development LLC	United States of America	10116970 15/581758	Apr 28, 2017	Issued
Empire Technology Development LLC	Japan	5233006 2006-326659	Dec 4, 2006	Issued
Empire Technology Development LLC	United States of America	8377708 12/665704	Dec 18, 2009	Issued
Empire Technology Development LLC	United States of America	9248439 14/412000	Dec 30, 2014	Issued
Empire Technology Development LLC	United States of America	14/410,524	Dec 22, 2014	Published
Empire Technology Development LLC	United States of America	9817002 14/403124	Mar 13, 2015	Issued
Empire Technology Development LLC	China	ZL201280073378.3 201280073378.3	Aug 6, 2012	Issued

SCHEDULE II
PATENT LICENSES

Attached.

SCHEDULE II TO PATENT SECURITY AGREEMENT

PATENT
REEL: 048373 FRAME: 0404

COBB_029495

Licensee	Grantor/Licensee	Country	Patent	Application Number	Application Filing Date	Status
Akita University	Empire Technology Development LLC	Japan	4904-497	2006-34-7521	Dec 25, 2006	Issued
Akita University	Empire Technology Development LLC	United States of America		8039640 12/251114	Jun 24, 2009	Issued
Anna university and XBC Research	Empire Technology Development LLC	United States of America		8307266 12/487313	Jun 18, 2009	Issued
Anna university and XBC Research	Empire Technology Development LLC	United States of America		8527852 13/653269	Oct 15, 2012	Issued
Anna university and XBC Research	Empire Technology Development LLC	India		2151/CHE/2008	Sep 2, 2008	Published
Anna university and XBC Research	Empire Technology Development LLC	United States of America		8665697 12/645709	Dec 23, 2009	Issued
Anna university and XBC Research	Empire Technology Development LLC	United States of America		7920599 12/726860	Mar 18, 2010	Issued
Anna university and XBC Research	Empire Technology Development LLC	China	21201080065905.7	201080065905.7	Sep 14, 2010	Issued
Anna university and XBC Research	Empire Technology Development LLC	Japan	35378609	2012-551695	Sep 14, 2010	Issued
Anna university and XBC Research	Empire Technology Development LLC	Republic of Korea	10-1412989	10-2012-7023018	Sep 14, 2010	Issued
Avind Vijay Keerthi	Empire Technology Development LLC	India		8526525 12/255572	Oct 21, 2008	Issued
Avind Vijay Keerthi	Empire Technology Development LLC	United States of America		2130/CHE/2008	Sep 1, 2008	Published
Avind Vijay Keerthi	Empire Technology Development LLC	China	21201080034799.6	201080034799.6	Nov 17, 2009	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		8639639 12/624374	Nov 23, 2009	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		9111272 12/731323	Mar 25, 2010	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		8682879 12/762224	Apr 16, 2010	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		9186075 13/060316	Feb 23, 2011	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		9146669 12/874411	Sep 2, 2010	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		9444626 14/832916	Aug 21, 2010	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		9830444 15/224535	Jul 30, 2016	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	China		201080065379.9	Nov 29, 2010	Marked for Infringing
Biogenetec Inc., Ltd.	Empire Technology Development LLC	European Patent Office		1084654.8	Nov 29, 2010	Published
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		201810472071.X	Jul 10, 2015	Marked for Infringing
Biogenetec Inc., Ltd.	Empire Technology Development LLC	China		14/796.888	Nov 29, 2010	Published
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Republic of Korea	10-146271	10-2012-7024223	Dec 15, 2010	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Japan	5512831	2012-554891	Dec 15, 2010	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	China	21201080066830.4	201080066830.4	Aug 6, 2010	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Republic of Korea	10-138982	10-2012-7028669	Aug 6, 2010	Issued
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Biogenetec Inc., Ltd.	Empire Technology Development LLC	China	21201080050686.5	201080050686.5	Dec 27, 2010	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Japan	5562437	2012-545865	Dec 27, 2010	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		9618531 14/379744	Aug 19, 2014	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		8846075 13/673916	Nov 9, 2012	Issued
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Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		9916197 14/728749	Jun 2, 2015	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		9946475 14/43349	May 15, 2015	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Republic of Korea	10-1710025	10-2015-7022938	Jul 5, 2015	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Republic of Korea	10-1889451	14/899.829	Dec 18, 2015	Marked for Infringing
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		10-2016-7015353	Nov 21, 2014	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Republic of Korea	6276857	14/451.859	Nov 21, 2014	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	European Patent Office		14664007.1	Aug 5, 2014	Published
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		9953271 14/451870	Nov 21, 2014	Published
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Republic of Korea	10-1868229	10-2016-7015481	Aug 5, 2014	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Japan	6212217	2016-532125	Nov 22, 2013	Issued
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Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		9858534 14/451899	Aug 5, 2014	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Republic of Korea	10-1868830	10-2016-7015549	Nov 21, 2014	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Japan	6212216	2016-532121	Nov 22, 2013	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	European Patent Office		14664908.0	Dec 28, 2017	Marked for Infringing
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		9059557 14/502864	Dec 28, 2017	Marked for Infringing
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		15/685.819	Sep 30, 2015	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		9263854 14/726406	May 29, 2015	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		9219486 14/79269	Sep 5, 2014	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		9473115 14/944925	Nov 18, 2015	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Republic of Korea	10-1693945	10-2016-7015348	Oct 24, 2014	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Germany	3072237	14662958.7	Oct 24, 2014	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Germany	3072237	602014033168.8	Oct 24, 2014	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United Kingdom	3072237	14662958.7	Oct 24, 2014	Issued
Biogenetec Inc., Ltd.	Empire Technology Development LLC	European Patent Office		18182228.9	Oct 24, 2014	Marked for Infringing
Biogenetec Inc., Ltd.	Empire Technology Development LLC	China		201480063075.2	Oct 24, 2014	Published
Biogenetec Inc., Ltd.	Empire Technology Development LLC	China		201580014774.2	Jan 17, 2014	Marked for Infringing
Biogenetec Inc., Ltd.	Empire Technology Development LLC	United States of America		15/112.156	Jul 15, 2016	Marked for Infringing
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Republic of Korea		10-2016-7021526	Jan 17, 2016	Marked for Infringing
Biogenetec Inc., Ltd.	Empire Technology Development LLC	Republic of Korea		10-2016-7026705	Feb 12, 2015	Allowed

California Institute of Technology ('Caltech')	Empire Technology Development LLC	United States of America	14/451,935	Aug 5, 2014	Marked for Impairing
California Institute of Technology ('Caltech')	Empire Technology Development LLC	European Patent Office	15/611,773	Feb 12, 2015	Published
California Institute of Technology ('Caltech')	Empire Technology Development LLC	United States of America	14/793,328	Jul 7, 2015	Published
California Institute of Technology ('Caltech')	Empire Technology Development LLC	Republic of Korea	10-2016-0085743	Jul 6, 2016	Published
California Institute of Technology ('Caltech')	Empire Technology Development LLC	China	201610534833.5	Jul 7, 2016	Published
Center for DNA Fingerprinting & Diagnostics	Empire Technology Development LLC	European Patent Office	16172168.3	May 31, 2016	Published
Chun Shig Sohn	Empire Technology Development LLC	United States of America	8513824	Aug 31, 2009	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	8603739	Mar 16, 2010	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	12/725353	Dec 15, 2010	Issued
Chun Shig Sohn	Empire Technology Development LLC	China	20108006514.5	Dec 15, 2010	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	8405267	Apr 7, 2010	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	8703313	Apr 19, 2010	Issued
Chun Shig Sohn	Empire Technology Development LLC	Japan	12/762300	Dec 15, 2010	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	2013-504069	Dec 15, 2010	Issued
Chun Shig Sohn	Empire Technology Development LLC	China	201080066103.8	Dec 15, 2010	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	9515307	Feb 3, 2011	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	14/1717436	Jun 11, 2010	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	9010128	Jun 11, 2010	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	8375727	Feb 23, 2012	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	8935561	Feb 17, 2012	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	8737225	May 21, 2014	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	9258759	Apr 27, 2015	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	9727363	Apr 30, 2014	Published
Chun Shig Sohn	Empire Technology Development LLC	China	201480077888.7	Mar 18, 2014	Published
Chun Shig Sohn	Empire Technology Development LLC	United States of America	9785769	Nov 16, 2015	Allowed
Chun Shig Sohn	Empire Technology Development LLC	China	201480075448.8	Mar 21, 2011	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	14/891,386	Feb 18, 2011	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	8822955	Jan 7, 2014	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	8653230	Jan 22, 2014	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	10087269	Jan 22, 2014	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	8687188	Jan 22, 2014	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	9482619	Jan 22, 2014	Issued
Chun Shig Sohn	Empire Technology Development LLC	China	201180072431.3	Jan 22, 2011	Issued
Chun Shig Sohn	Empire Technology Development LLC	Japan	5852245	Dec 7, 2011	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	9493351	Dec 7, 2011	Issued
Chun Shig Sohn	Empire Technology Development LLC	China	201180074686.3	Feb 6, 2013	Issued
Chun Shig Sohn	Empire Technology Development LLC	Japan	5836497	Sep 30, 2011	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	882384	Sep 30, 2011	Issued
Chun Shig Sohn	Empire Technology Development LLC	China	201454575	Dec 12, 2014	Issued
Chun Shig Sohn	Empire Technology Development LLC	Japan	21201180072511.9	Aug 17, 2013	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	1557212	Mar 22, 2013	Issued
Chun Shig Sohn	Empire Technology Development LLC	China	201180072511.9	Jan 22, 2011	Issued
Chun Shig Sohn	Empire Technology Development LLC	Japan	5813878	Sep 30, 2011	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	9821296	Aug 17, 2013	Issued
Chun Shig Sohn	Empire Technology Development LLC	Taiwan R.O.C.	102109997	Jan 22, 2013	Issued
Chun Shig Sohn	Empire Technology Development LLC	Taiwan R.O.C.	1596191	Jan 22, 2013	Issued
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Chun Shig Sohn	Empire Technology Development LLC	Taiwan R.O.C.	1468500	Jan 22, 2013	Issued
Chun Shig Sohn	Empire Technology Development LLC	Taiwan R.O.C.	1021101948	Apr 25, 2013	Issued
Chun Shig Sohn	Empire Technology Development LLC	Taiwan R.O.C.	102114801	Apr 25, 2013	Issued
Chun Shig Sohn	Empire Technology Development LLC	Taiwan R.O.C.	102114874	Apr 25, 2013	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	9976081	Oct 26, 2015	Issued
Chun Shig Sohn	Empire Technology Development LLC	China	201380076051.6	Mar 25, 2015	Issued
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Chun Shig Sohn	Empire Technology Development LLC	United States of America	102140716	Jun 10, 2015	Marked for Impairing
Chun Shig Sohn	Empire Technology Development LLC	China	14/651,116	Jul 24, 2013	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	201380078289.2	Jan 25, 2016	Published
Chun Shig Sohn	Empire Technology Development LLC	United States of America	14/907,527	Sep 4, 2015	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	10002720	Jun 16, 2014	Issued
Chun Shig Sohn	Empire Technology Development LLC	Taiwan R.O.C.	103120737	Apr 19, 2016	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	9908780	Oct 31, 2013	Issued
Chun Shig Sohn	Empire Technology Development LLC	China	20138008614.9	Oct 24, 2016	Published
Chun Shig Sohn	Empire Technology Development LLC	China	15/306,420	Apr 23, 2014	Published
Chun Shig Sohn	Empire Technology Development LLC	United States of America	201480078011.X	Apr 19, 2016	Published
Chun Shig Sohn	Empire Technology Development LLC	United States of America	15/030,580	Oct 3, 2016	Marked for Impairing
Chun Shig Sohn	Empire Technology Development LLC	United States of America	10071910	Apr 28, 2016	Issued
Chun Shig Sohn	Empire Technology Development LLC	United States of America	15/030,302	Sep 8, 2016	Issued
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East China University of Science and Technology	Empire Technology Development LLC	United States of America	15/313.873	Nov 23, 2016	Published		
East China University of Science and Technology	Empire Technology Development LLC	United States of America	15/313.855	Nov 23, 2016	Published		
East China University of Science and Technology	Empire Technology Development LLC	United States of America	15/354.906	Jun 9, 2017	Marked for Infringing		
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East China University of Science and Technology	Empire Technology Development LLC	United States of America	15/310.760	Nov 12, 2016	Published		
East China University of Science and Technology	Empire Technology Development LLC	China	201480078714.2	May 14, 2014	Published		
East China University of Science and Technology	Empire Technology Development LLC	European Patent Office	14691721.4	May 14, 2016	Marked for Infringing		
EMPIRE TECHNOLOGY DEVELOPMENT LLC	Empire Technology Development LLC	United States of America	15/313.702	Nov 23, 2016	Published		
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EMPIRE TECHNOLOGY DEVELOPMENT LLC	Empire Technology Development LLC	United States of America	14/903.922	Jan 8, 2016	Published		
EMPIRE TECHNOLOGY DEVELOPMENT LLC	Empire Technology Development LLC	Republic of Korea	8583151	13/576277	Jan 8, 2016	Published	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	China	10-1472796	10-2014-7011046	Nov 23, 2016	Published	
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Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	7829935	12/600986	Nov 19, 2009	Issued	
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Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	Japan	5035732	2009-525836	Jul 31, 2008	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	4392051	8331120	12/665316	Dec 17, 2009	Issued
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	Japan	4392052	2008-548909	Mar 27, 2008	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	8044382	12/601794	Mar 26, 2008	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	8330141	13/237449	Nov 24, 2008	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	8470693	12/665242	Sep 20, 2011	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	Japan	4493730	2009-525835	Dec 17, 2009	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	4462105	12/665591	Jul 31, 2008	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	Japan	4465556	2008-035661	Dec 18, 2009	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	8368046	12/272585	Feb 17, 2009	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	8980658	13/755846	Jan 31, 2013	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	4215812	2008-045785	Feb 27, 2008	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	Japan	7720389	12/393458	Feb 26, 2009	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	4227667	2008-538610	May 2, 2008	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	4229880	7847225	12/602072	Nov 25, 2009	Issued
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	Japan	4303312	7853075	12/601595	Jul 31, 2008	Issued
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	4208958	2008-552632	Nov 24, 2009	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	Japan	7746678	12/664946	Dec 16, 2009	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	4427574	2008-527230	Feb 22, 2008	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	Japan	7957171	12/523876	Aug 26, 2009	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	4594971	2007-308536	Nov 30, 2007	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	4427589	7957171	12/128126	May 28, 2008	Issued
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	7907847	12/323841	Sep 12, 2007	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	9430034	14/422560	Jul 17, 2009	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	9430424	14/422558	Nov 10, 2009	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	Japan	2008-150335	2007-131078	May 16, 2007	Published	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	7907847	12/323841	Jun 9, 2008	Issued	
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Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	United States of America	9430424	14/422558	Feb 19, 2015	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	Republic of Korea	10-1157578	10-2016-7000465	Feb 19, 2015	Issued	
Hankuk University of Foreign Studies Research and Industry-University Cooperation Foundation	Empire Technology Development LLC	European Patent Office	13889335.9	10-2016-7000465	Jul 9, 2013	Published	

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Hua Zhong University of Science Technology	Empire Technology Development LLC	United States of America	9785558, 15/032636	Apr 28, 2016	Issued
Hua Zhong University of Science Technology	Empire Technology Development LLC	China	201380080189, 3	Oct 29, 2013	Issued
Hua Zhong University of Science Technology	Empire Technology Development LLC	United States of America	9275240, 14/422591	Feb 19, 2015	Issued
Hua Zhong University of Science Technology	Empire Technology Development LLC	United States of America	9772881, 14/647959	May 28, 2015	Issued
Hua Zhong University of Science Technology	Empire Technology Development LLC	United States of America	9390513, 14/422932	Feb 20, 2015	Issued
Hua Zhong University of Science Technology	Empire Technology Development LLC	United States of America	15/537, 274	Jun 16, 2017	Marked for Infringing
Hua Zhong University of Science Technology	Empire Technology Development LLC	United States of America	10083117, 15/508028	Mar 1, 2017	Issued
Hua Zhong University of Science Technology	Empire Technology Development LLC	United States of America	9934281, 15/126248	Sep 30, 2016	Published
Hua Zhong University of Science Technology	Empire Technology Development LLC	Republic of Korea	10-2009-0024396	Sep 14, 2016	Issued
Hua Zhong University of Science Technology	Empire Technology Development LLC	China	2120091026064, 0	Dec 18, 2009	Issued
IGRS Engineering Lab Ltd.	Empire Technology Development LLC	United States of America	8971154, 12/502933	Jul 14, 2009	Issued
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IGRS Engineering Lab Ltd.	Empire Technology Development LLC	United States of America	7892792, 12/491909	Jun 25, 2009	Issued
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Indian Institute of Science	Empire Technology Development LLC	Germany	112010004479, 1	Sep 10, 2010	Published
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Indian Institute of Science	Empire Technology Development LLC	China	201080048564, 2	Sep 8, 2010	Issued
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Indian Institute of Science	Empire Technology Development LLC	United States of America	8250927	12/276091	Mar 17, 2010	Issued
Indian Institute of Science	Empire Technology Development LLC	United States of America	7982371	12/718159	Mar 5, 2010	Issued
Indian Institute of Science	Empire Technology Development LLC	United States of America	8508108	13/161218	Jun 15, 2011	Issued
Indian Institute of Science	Empire Technology Development LLC	United States of America	8630971	12/652408	Jan 5, 2010	Issued
Indian Institute of Science	Empire Technology Development LLC	China	Z1201080045971.8	201080045971.8	Sep 8, 2010	Issued
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Indian Institute of Science	Empire Technology Development LLC	Australia	2010320612	2010320612	Sep 8, 2010	Issued
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Indian Institute of Science	Empire Technology Development LLC	United States of America	8503444	12/771730	Apr 30, 2010	Issued
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Indian Institute of Science	Empire Technology Development LLC	India	0767/DBL/2011		Mar 18, 2011	Published
Indian Institute of Science	Empire Technology Development LLC	United States of America	14/907/296		Nov 25, 2016	Allowed
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Indian Institute of Technology Delhi	Empire Technology Development LLC	Japan	1613/05/2014	May 27, 2015	Issued
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Indian Institute of Technology Kanpur	Empire Technology Development LLC	India	4097/05/2015	Jun 29, 2011	Issued
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Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	8463021.12/883649	Mar 12, 2014	Issued
Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	9778202.13/878944	Nov 29, 2010	Issued
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Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	8883303.13/885839	Apr 17, 2013	Issued
Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	8569602.13/880020	Nov 17, 2011	Issued
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Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	8880192.13/371063	Mar 28, 2011	Issued
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Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	9540546.13/963458	Mar 9, 2012	Issued
Indian Institute of Technology Kanpur	Empire Technology Development LLC	China	21201280057431.0	Dec 19, 2011	Published
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Indian Institute of Technology Kanpur	Empire Technology Development LLC	India	3719/05/2011	Sep 3, 2013	Issued
Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	8545595.13/359798	May 29, 2012	Issued
Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	9527730.14/016281	Nov 13, 2015	Issued
Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	9899466.13/482564	Nov 23, 2012	Issued
Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	9756767.14/6891046	Dec 10, 2013	Issued
Indian Institute of Technology Kanpur	Empire Technology Development LLC	Taiwan R.O.C.	1001454/12	Aug 25, 2014	Issued
Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	9515273.14/380706	Mar 18, 2013	Issued
Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	10007883.14/429664	Dec 28, 2013	Allowed
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Indian Institute of Technology Kanpur	Empire Technology Development LLC	India	14/435.423	Oct 17, 2012	Published
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Indian Institute of Technology Kanpur	Empire Technology Development LLC	China	21201410410762.9	May 30, 2016	Published
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Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	14/770.095	Jan 7, 2014	Issued
Indian Institute of Technology Kanpur	Empire Technology Development LLC	China	201480072395.4	Jul 28, 2016	Published
Indian Institute of Technology Kanpur	Empire Technology Development LLC	India	0050/05/2014	Jan 7, 2014	Issued
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Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	151/12.404	Aug 29, 2016	Published
Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	9908102.14/663070	Apr 9, 2015	Issued
Indian Institute of Technology Kanpur	Empire Technology Development LLC	India	2232/05/2014	Aug 6, 2014	Published
Indian Institute of Technology Kanpur	Empire Technology Development LLC	United States of America	14/818.250	Aug 4, 2015	Published
Indian Institute of Technology Kanpur	Empire Technology Development LLC	India	16657/05/2014	Jun 24, 2014	Marked for Impairing
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Indian Institute of Technology Kanpur	Empire Technology Development LLC	India	3053/05/2014	Oct 24, 2014	Marked for Impairing
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Indian Institute of Technology Kharagpur	Empire Technology Development LLC	United States of America	15/118,120	Aug 11, 2016	Published
Indian Institute of Technology Madras	Empire Technology Development LLC	United States of America	8260589 12/647072	Dec 24, 2009	Issued
Indian Institute of Technology Madras	Empire Technology Development LLC	United States of America	8660825 13/654547	Aug 1, 2012	Issued
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Indian Institute of Technology Madras	Empire Technology Development LLC	China	21201080037762.9	201080037762.9	
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Indian Institute of Technology Madras	Empire Technology Development LLC	China	21201080036576.3	201080036576.3	
Indian Institute of Technology Madras	Empire Technology Development LLC	Japan	5931725	2012-525219	
Indian Institute of Technology Madras	Empire Technology Development LLC	India	1967/CHE/2009	Aug 18, 2009	Published
Indian Institute of Technology Madras	Empire Technology Development LLC	United States of America	8191126 12/434728	May 4, 2011	Issued
Indian Institute of Technology Madras	Empire Technology Development LLC	United States of America	8187976 12/643992	Dec 21, 2009	Issued
Indian Institute of Technology Madras	Empire Technology Development LLC	China	21201080041994.1	201080041994.1	
Indian Institute of Technology Madras	Empire Technology Development LLC	Japan	5504346	2012-526134	
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Indian Institute of Technology Madras	Empire Technology Development LLC	United States of America	8358833 12/768467	Nov 10, 2009	Published
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Indian Institute of Technology Madras	Empire Technology Development LLC	United States of America	8294306 12/725053	Dec 17, 2012	Issued
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Indian Institute of Technology Madras	Empire Technology Development LLC	United States of America	9327054 13/202941	Nov 4, 2010	Published
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Indian Institute of Technology Madras	Empire Technology Development LLC	United States of America	8999717 13/504440	Jul 19, 2016	Published
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Indian Institute of Technology Madras	Empire Technology Development LLC	United States of America	8623784 13/786166	Aug 14, 2014	Published
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Indian Institute of Technology Madras	Empire Technology Development LLC	China	201180074423.2	201180074423.2	
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Indian Institute of Technology Madras	Empire Technology Development LLC	United States of America	9903821 14/088193	Oct 30, 2015	Issued
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Indian Institute of Technology Madras	Empire Technology Development LLC	United States of America	9953367 14/783811	Oct 9, 2015	Issued
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Indian Institute of Technology Madras	Empire Technology Development LLC	United States of America	9980076 14/784889	Sep 12, 2014	Issued
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Indian Statistical Institute	Empire Technology Development LLC	United States of America	8700548 13/785460	Oct 20, 2011	Issued
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Indian Statistical Institute	Empire Technology Development LLC	United States of America	8744208 13/788416	Mar 7, 2013	Issued
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Indian Statistical Institute	Empire Technology Development LLC	China	61200780007252.5	Jan 31, 2007	Issued
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Indian Statistical Institute	Empire Technology Development LLC	China	21201080067806.2	Sep 2, 2010	Issued

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Jawaharlal Nehru Centre for Advanced Scientific Research	Empire Technology Development LLC	United States of America	9994569	151516709	May 17, 2016 Issued
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Korea University Research and Business Foundation	Empire Technology Development LLC	Republic of Korea	10-1313388	2011-7019969	Jul 5, 2010	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	Japan	5583752	2012-501947	Jul 5, 2010	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	8741417 12/762183	8741417 12/762183	Apr 16, 2010	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	9164128 14/260088	9164128 14/260088	Apr 23, 2014	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	8344295 12/579128	8344295 12/579128	Oct 14, 2010	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	Republic of Korea	10-1343014	10-2012-7012209	Oct 8, 2010	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	Japan	5337309	2012-534102	Oct 8, 2010	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	8202436 12/642556	8202436 12/642556	Dec 18, 2009	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	8521189 12/648300	8521189 12/648300	May 19, 2009	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	9168680 13/559640	9168680 13/559640	Jul 27, 2012	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	Japan	5550722	2012-514897	Jul 5, 2010	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	European Patent Office	10797266.3	10797266.3	Jul 5, 2010	Published
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	8563086 12/507718	8563086 12/507718	Jul 22, 2009	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	9102515 14/054679	9102515 14/054679	Oct 15, 2013	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	9126836 12/648110	9126836 12/648110	Dec 28, 2009	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	10077191 14/813887	10077191 14/813887	Jul 30, 2015	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	8221592 12/620761	8221592 12/620761	Nov 18, 2009	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	8470256 13/495266	8470256 13/495266	Nov 13, 2012	Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	9197902 13/320748	9197902 13/320748	Nov 15, 2011	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	Republic of Korea	5640157	2013-540456	Jan 14, 2011	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	Republic of Korea	10-1490153	10-2013-7017215	Nov 14, 2011	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	United States of America	8451147 13/320368	8451147 13/320368	Oct 18, 2010	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	China	2120108006804.3	20108006804.3	Oct 18, 2010	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	Republic of Korea	10-1451254	10-2013-7003963	Oct 18, 2010	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	Germany	112010005747.8	112010005747.8	Oct 18, 2010	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	United States of America	9408242 13/266128	9408242 13/266128	Oct 18, 2010	Published
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	China	21201180067231.9	201180067231.9	Feb 24, 2011	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	Japan	5687773	2013-547916	Feb 24, 2011	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	Republic of Korea	10-1500477	10-2013-7020643	Feb 24, 2011	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	European Patent Office	2661816	11854899.9	Feb 24, 2011	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	France	2661816	11854899.9	Feb 24, 2011	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	Germany	2661816	11854899.9	Feb 24, 2011	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	United Kingdom	2661816	11854899.9	Feb 24, 2011	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	India	0060/CHE/2011	0060/CHE/2011	Jan 7, 2011	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	United States of America	8570203 13/389562	8570203 13/389562	Feb 8, 2012	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	United States of America	9100044 14/053470	9100044 14/053470	Oct 15, 2013	Issued
M.S. Ramalan School of Advanced Studies	Empire Technology Development LLC	United States of America	8929622 12/634260	8929622 12/634260	Dec 9, 2009	Issued

Manpai Institute of Technology	Empire Technology Development LLC	United States of America	9516346	12/62/7737	Nov 30, 2009	Issued
Manpai Institute of Technology	Empire Technology Development LLC	United States of America	9196047	13/375135	Nov 29, 2011	Issued
Manpai Institute of Technology	Empire Technology Development LLC	United States of America	8295280	12/726945	Mar 18, 2010	Issued
Manpai Institute of Technology	Empire Technology Development LLC	India	281656	2254/CHE/2009	Sep 16, 2009	Issued
Manpai Institute of Technology	Empire Technology Development LLC	United States of America	8659463	13/781977	Jan 3, 2012	Issued
Manpai Institute of Technology	Empire Technology Development LLC	China	Z1201080069132.X	201080069132.X	Dec 1, 2012	Issued
Manpai University	Empire Technology Development LLC	United States of America	8516837	13/030899	Feb 18, 2013	Issued
Manpai University	Empire Technology Development LLC	United States of America	9305311	13/808910	Jan 8, 2013	Issued
Manpai University	Empire Technology Development LLC	China	Z1201080068985.1	201080068985.1	Dec 1, 2010	Issued
Manpai University	Empire Technology Development LLC	Japan	5512889	2013-517564	Dec 1, 2010	Issued
Manpai University	Empire Technology Development LLC	Republic of Korea	10-1428618	10-2013-7093405	Dec 1, 2010	Issued
Manpai University	Empire Technology Development LLC	Japan	5841661	9085079	Aug 16, 2012	Issued
McGill University	Empire Technology Development LLC	United States of America	9680271	14/492748	Aug 1, 2011	Issued
McGill University	Empire Technology Development LLC	United States of America	9400269	14/492811	Sep 22, 2014	Issued
McMaster University	Empire Technology Development LLC	United States of America	9257601	13/812058	Sep 22, 2014	Issued
McMaster University	Empire Technology Development LLC	China	Z1201280021206.1	201280021206.1	Jan 24, 2013	Issued
McMaster University	Empire Technology Development LLC	United States of America	9824892	13/812089	May 17, 2012	Issued
McMaster University	Empire Technology Development LLC	Republic of Korea	10-1554932	10-2013-7031162	May 17, 2012	Issued
McMaster University	Empire Technology Development LLC	China	10-1659914	9294711	May 17, 2012	Marked for Inpat'ing
McMaster University	Empire Technology Development LLC	Republic of Korea	10-1659914	10-2014-7033807	Nov 25, 2013	Issued
McMaster University	Empire Technology Development LLC	United States of America	9908027	15/054162	Mar 15, 2013	Issued
McMaster University	Empire Technology Development LLC	United States of America	9591272	14/115093	Feb 26, 2016	Issued
McMaster University	Empire Technology Development LLC	Japan	5992090	2015-502029	Oct 31, 2013	Issued
McMaster University	Empire Technology Development LLC	United States of America	9942468	15/422456	Mar 28, 2013	Issued
McMaster University	Empire Technology Development LLC	China	201380080170.9	201380080170.9	Feb 1, 2017	Issued
McMaster University	Empire Technology Development LLC	United States of America	9841381	13/027644	Oct 10, 2013	Allowed
Minister of Industry for Communications Research Centre Canada	Empire Technology Development LLC	United States of America	9288126	12/845360	Apr 26, 2016	Issued
Minister of Industry for Communications Research Centre Canada	Empire Technology Development LLC	Canada	2,711.892	2,711.892	Jul 30, 2010	Issued
Minister of Industry for Communications Research Centre Canada	Empire Technology Development LLC	United States of America	9762467	15/052345	Feb 24, 2016	Issued
Minister of Industry for Communications Research Centre Canada	Empire Technology Development LLC	United States of America	9882192	13/082102	Apr 7, 2011	Issued
Moriota Mizuno	Empire Technology Development LLC	Japan	5681965	2007-248433	Sep 26, 2007	Issued
Nanjing University	Empire Technology Development LLC	United States of America	8421485	12/665431	Dec 18, 2009	Issued
Nanjing University	Empire Technology Development LLC	China	Z1200810041377.6	200810041377.6	Aug 4, 2008	Issued
Nanjing University	Empire Technology Development LLC	China	Z1200810041376.1	200810041376.1	Aug 4, 2008	Issued
Nanjing University	Empire Technology Development LLC	China	Z1200810041375.7	200810041375.7	Aug 4, 2008	Issued
Nanjing University	Empire Technology Development LLC	China	Z1200810041376.0	200810041376.0	Aug 4, 2008	Issued
Nanjing University	Empire Technology Development LLC	China	Z1200710133806.8	200710133806.8	Oct 9, 2007	Issued
Nanjing University	Empire Technology Development LLC	United States of America	8155733	12/467659	May 15, 2009	Issued
Nanjing University	Empire Technology Development LLC	China	8543196	13/407456	Feb 28, 2012	Issued
Nanjing University	Empire Technology Development LLC	United States of America	21200980115995.3	200980115995.3	Dec 7, 2009	Issued
Nanjing University	Empire Technology Development LLC	United States of America	8753246	12/993337	Nov 18, 2010	Issued
Nanjing University	Empire Technology Development LLC	United States of America	8847948	13/010087	May 4, 2011	Issued
Nanjing University	Empire Technology Development LLC	Brazil	11 2012.025192.9		May 31, 2010	Pending
Nanjing University	Empire Technology Development LLC	United States of America	9545603	13/505715	May 2, 2012	Issued
Nanjing University	Empire Technology Development LLC	United States of America	9116300	13/146308	Jul 26, 2011	Issued
Nanjing University	Empire Technology Development LLC	China	Z120108006730.3	20108006730.3	Jun 25, 2010	Issued
Nanjing University	Empire Technology Development LLC	Japan	5669937	20108006730.3	Jun 25, 2010	Issued
Nanjing University	Empire Technology Development LLC	European Patent Office	10853449.6		Jun 25, 2010	Published
Nanjing University	Empire Technology Development LLC	United States of America	9744495	14/427037	May 8, 2015	Issued
Nanjing University	Empire Technology Development LLC	United States of America	8839689	13/814710	Feb 6, 2013	Issued
Nanjing University	Empire Technology Development LLC	China	Z1201180074302.8	201180074302.8	Nov 10, 2011	Issued
Nanjing University	Empire Technology Development LLC	Japan	5901776	2014-533753	Nov 10, 2011	Issued
Nanjing University	Empire Technology Development LLC	Republic of Korea	10-1593928	10-2014-7013891	Nov 10, 2011	Issued
Nanjing University	Empire Technology Development LLC	United States of America	9949721	14/779172	Sep 22, 2013	Issued
Nanjing University	Empire Technology Development LLC	China	Z1201380076565.1	201380076565.1	May 29, 2009	Issued
National Center for Biological Sciences	Empire Technology Development LLC	United States of America	9250232	12/474550	Nov 30, 2009	Issued
National Center for Biological Sciences	Empire Technology Development LLC	United States of America	8476006	12/628064	Nov 30, 2009	Issued
National Center for Biological Sciences	Empire Technology Development LLC	United States of America	8906604	13/915195	Jun 11, 2013	Issued
National Center for Biological Sciences	Empire Technology Development LLC	United States of America	8153437	12/720952	Mar 10, 2010	Issued
National Center for Biological Sciences	Empire Technology Development LLC	United States of America	8216850	13/220973	Aug 12, 2011	Issued
National Center for Biological Sciences	Empire Technology Development LLC	United States of America	9722336	14/851446	Sep 16, 2015	Issued
National University of Singapore	Empire Technology Development LLC	United States of America	9733393	13/148208	Aug 5, 2011	Issued
National University of Singapore	Empire Technology Development LLC	China	Z1201180061852.6	201180061852.6	Feb 24, 2011	Issued
National University of Singapore	Empire Technology Development LLC	Japan	5360303	2013-554421	Feb 24, 2011	Issued
National University of Singapore	Empire Technology Development LLC	United States of America	9453942	13/492011	Jun 8, 2012	Issued

New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8587490	12/15/10040	Jun 27, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Japan	5352793	2012-522833	Jun 11, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9041612	14/05/8147	Oct 18, 2013	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8159952	12/36/8516	Feb 10, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8995456	12/42/0714	Apr 8, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	European Patent Office	2238895	10154701.6	Feb 25, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Japan	5203402	2010-024984	Feb 8, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Germany	2238895	602010002368.0	Feb 25, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United Kingdom	2238895	10154701.6	Feb 25, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	France	2238895	10154701.6	Feb 25, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8200034	12/42/2683	Apr 13, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8300650	12/46/5328	Jun 16, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	21201080036269.5	201080036269.5	Jun 16, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8537892	12/42/2138	Apr 10, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8184627	12/39/6039	Apr 2, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8310930	12/47/9438	Jun 5, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	21201080024841.6	201080024841.6	Jun 3, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Japan	5528546	2012-514139	Jun 3, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9215090	13/65/9215	Oct 16, 2012	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Germany	112010002237.2	112010002237.2	Jun 3, 2010	Published
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8675673	12/51/1424	Jul 29, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	21201080033402.1	201080033402.1	Jun 10, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9100322	14/16/6802	Jan 28, 2014	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	European Patent Office	10804851.3	10804851.3	Jun 10, 2010	Published
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8786974	12/49/0293	Dec 23, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	121649.013	121649.013	Dec 23, 2009	Allowed
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8385231	12/51/2655	Jul 30, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	201080033581.9	201080033581.9	Jun 10, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	10804852.1	10804852.1	Jun 10, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Germany	602010049889.1	602010049889.1	Jun 10, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	France	2460324	10804852.1	Jun 10, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United Kingdom	2460324	10804852.1	Jun 10, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8885514	12/51/2792	Jun 10, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8095006	12/38/9909	Feb 20, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8260067	12/42/1949	Apr 10, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8121119	12/41/8481	Apr 6, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8086978	12/47/9574	Jun 5, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	201080023940.2	201080023940.2	Jun 3, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Japan	5461693	2012-514142	Jun 3, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Germany	112010002229.1	112010002229.1	Jun 3, 2010	Published
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8274988	12/51/1814	Jul 29, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	21201080033162.5	201080033162.5	Jun 10, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	European Patent Office	10804853.9	10804853.9	Jun 10, 2010	Published
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8281138	12/42/2677	Apr 13, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8275019	12/46/5814	Jun 16, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8472502	13/59/2261	Aug 22, 2012	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8379746	12/36/5800	Feb 4, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8175324	12/25/3825	Oct 17, 2008	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8355426	12/43/0788	Apr 27, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	201010124318.2	201010124318.2	Feb 26, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Republic of Korea	10-1242650	10-2011-7028392	Apr 26, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9258361	12/42/0724	Apr 8, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8576896	12/36/5812	Feb 4, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Japan	2009-287081	2009-287081	Dec 18, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	5203345	8351786	Mar 12, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	21201080021246.7	201080021246.7	Mar 13, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Germany	112010001305	112010001305.5	Mar 13, 2011	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8902912	13/257305	Sep 18, 2011	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	21201080044846.2	201080044846.2	Nov 3, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8487296	12/63/6077	Nov 25, 2009	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9129803	13/92/0814	Mar 28, 2011	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8874230	13/12/1346	Mar 28, 2011	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	European Patent Office	10812477.7	10812477.7	Aug 4, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	201080043053.1	602010045437.1	Aug 4, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Germany	2470100	10812477.7	Aug 4, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	France	2470100	10812477.7	Aug 4, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United Kingdom	2470100	10812477.7	Aug 4, 2010	Issued

New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8521025	12/996/772	Dec 8, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	Z1201080035331.7	201080035331.7	Aug 13, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Republic of Korea	10-1358795	10-2012-7006582	Aug 13, 2010	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8838867	13/172741	Jun 29, 2011	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9047223	14/322883	Jul 2, 2014	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	8700928	13/819267	Feb 26, 2013	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9237107	13/292701	Nov 15, 2011	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9138791	14/345211	Mar 16, 2014	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9246334	13/661017	Oct 25, 2012	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9118357	13/682867	Apr 30, 2012	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	2012800767347	201280076734.7	Oct 30, 2012	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9392475	14/349313	Apr 2, 2014	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9501093	13/981080	Jul 22, 2013	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9277497	13/881147	Apr 23, 2013	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9804623	14/342191	Feb 28, 2014	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9190734	13/814918	Feb 7, 2013	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	Z1201280038882.X	201280038882.X	Aug 8, 2012	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Japan	6151251	2014-525101	Aug 8, 2012	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	Republic of Korea	10-1597476	10-2014-7006582	Aug 9, 2011	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9516589	14/117078	Oct 8, 2013	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9233719	14/364656	Jun 11, 2014	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	15/038,974	15/038,974	May 24, 2016	Published
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9742675	14/353366	Apr 21, 2014	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	10046976	14/917621	Mar 9, 2016	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	United States of America	9544233	14/436047	Apr 15, 2015	Issued
New Jersey Institute of Technology	Empire Technology Development LLC	China	201480077466.X	201480077466.X	Apr 28, 2014	Published
Northeastern University Technology Transfer Center	Empire Technology Development LLC	China	Z1200910080821.X	200910080821.X	Mar 23, 2009	Issued
Northeastern University Technology Transfer Center	Empire Technology Development LLC	United States of America	8586664	12/1727062	Mar 18, 2010	Issued
Northeastern University Technology Transfer Center	Empire Technology Development LLC	United States of America	8756658	12/813724	Jun 11, 2010	Issued
Northeastern University Technology Transfer Center	Empire Technology Development LLC	United States of America	8761211	13/256635	Sep 15, 2011	Issued
Northeastern University Technology Transfer Center	Empire Technology Development LLC	Japan	5433086	2012-539164	May 25, 2010	Issued
Northeastern University Technology Transfer Center	Empire Technology Development LLC	United States of America	8521714	13/265229	Oct 19, 2011	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	Japan	4641550	2008-148285	Jun 5, 2008	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	Japan	4389034	2008-148286	Jun 5, 2008	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	Japan	4489825	2008-533010	Sep 7, 2006	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	9032336	12/460150	Dec 28, 2009	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	14/692318	14/692318	Apr 21, 2015	Published
Osaka Electro-Communication University	Empire Technology Development LLC	Japan	2008-533009	2008-533009	Sep 7, 2006	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	Japan	4545214	2008-544056	Nov 17, 2006	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	4255985	2008-538525	May 15, 2009	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	Japan	4342903	2008-538525	Oct 11, 2006	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	Japan	7885731	12/445461	Apr 10, 2009	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	4278709	2008-559040	Dec 25, 2006	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	8066902	12/520966	Jun 23, 2009	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	8428701	13/269974	Oct 10, 2011	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	Japan	4411387	2009-526287	Aug 7, 2007	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	8717292	12/666622	Dec 22, 2009	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	9632585	14/221481	Mar 21, 2014	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	9921663	15/495741	Apr 24, 2017	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	Japan	4580039	2010-104147	Apr 28, 2010	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	8173006	12/895568	Sep 30, 2010	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	9115011	13/466554	May 8, 2012	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	9244190	13/548226	Jul 13, 2012	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	9467875	14/110743	Oct 9, 2013	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	9546428	14/115085	Oct 31, 2013	Issued
Osaka Electro-Communication University	Empire Technology Development LLC	United States of America	15/789,497	15/789,497	Jun 22, 2016	Published
Peking University	Empire Technology Development LLC	China	Z120088004208.3	20088004208.3	Aug 11, 2008	Issued
Peking University	Empire Technology Development LLC	United States of America	8367214	12/529217	Aug 31, 2009	Issued
Peking University	Empire Technology Development LLC	United States of America	8614003	13/739688	Jan 11, 2013	Issued
Peking University	Empire Technology Development LLC	China	Z120088004236.5	20088004236.5	Aug 29, 2008	Issued
Peking University	Empire Technology Development LLC	United States of America	8021157	12/529229	Aug 31, 2009	Issued
Peking University	Empire Technology Development LLC	United States of America	8097639	12/529231	Aug 31, 2009	Issued
Peking University	Empire Technology Development LLC	China	20088004198.3	20088004198.3	Aug 29, 2008	Published
Peking University	Empire Technology Development LLC	United States of America	8803880	12/545420	Aug 21, 2009	Issued
Peking University	Empire Technology Development LLC	United States of America	8526713	12/995751	Dec 2, 2010	Issued
Peking University	Empire Technology Development LLC	Japan	5473096	2012-542329	Dec 7, 2009	Issued
Peking University	Empire Technology Development LLC	Republic of Korea	10-1566459	10-2012-7017661	Dec 7, 2009	Issued

Peking University	Empire Technology Development LLC	United States of America	8891857	13/955846	Jul 31, 2013	Issued
Peking University	Empire Technology Development LLC	United States of America	8842915	13/260109	Sep 23, 2011	Issued
Peking University	Empire Technology Development LLC	United States of America	9661551	13/147594	Aug 3, 2011	Issued
Peking University	Empire Technology Development LLC	China	21201080069013.4	201080069013.4	Jul 8, 2010	Issued
Peking University	Empire Technology Development LLC	Republic of Korea	10-1450034	10-137003400	Jul 8, 2010	Issued
Peking University	Empire Technology Development LLC	Japan	5065394	2013-516954	Jul 8, 2010	Issued
Peking University	Empire Technology Development LLC	United States of America		15/602.045	May 22, 2017	Published
Peking University	Empire Technology Development LLC	United States of America	8515167	12/551093	Aug 31, 2009	Issued
Peking University	Empire Technology Development LLC	United States of America	8433150	12/568584	Sep 28, 2009	Issued
Peking University	Empire Technology Development LLC	United States of America	8687908	13/853862	Mar 29, 2009	Issued
Peking University	Empire Technology Development LLC	China	21200910139915.X	200910139915.X	Jul 10, 2009	Issued
Peking University	Empire Technology Development LLC	United States of America	8564533	12/567664	Sep 25, 2009	Issued
Peking University	Empire Technology Development LLC	Japan	5507679	2012-513330	Sep 25, 2009	Issued
Peking University	Empire Technology Development LLC	Republic of Korea	10-1350526	10-2012-7000676	May 20, 2010	Issued
Peking University	Empire Technology Development LLC	United States of America	8797261	14/024015	May 20, 2010	Issued
Peking University	Empire Technology Development LLC	United States of America	9081414	14/311443	Sep 11, 2013	Issued
Peking University	Empire Technology Development LLC	Canada	2,696,910	2,696,910	Jun 23, 2014	Issued
Peking University	Empire Technology Development LLC	United States of America	8437538	12/569480	Mar 15, 2010	Issued
Peking University	Empire Technology Development LLC	China	21201080043589.3	201080043589.3	Sep 29, 2009	Issued
Peking University	Empire Technology Development LLC	Japan	5557918	2012-531217	May 20, 2010	Issued
Peking University	Empire Technology Development LLC	Republic of Korea	10-1589172	10-2012-7010833	May 20, 2010	Issued
Peking University	Empire Technology Development LLC	United States of America	8934708	13/837956	Mar 15, 2013	Issued
Peking University	Empire Technology Development LLC	European Patent Office	10819821.9	BR1120120069187	May 20, 2010	Published
Peking University	Empire Technology Development LLC	Brazil	8859762	13/294764	May 20, 2010	Published
Peking University	Empire Technology Development LLC	United States of America	21201080069665.8	201080069665.8	Mar 7, 2012	Issued
Peking University	Empire Technology Development LLC	China		201080069665.8	Nov 26, 2010	Issued
Peking University	Empire Technology Development LLC	United States of America	10-1436342	13/257791	Sep 20, 2011	Issued
Peking University	Empire Technology Development LLC	Republic of Korea	5746766	2013-522066	Aug 2, 2010	Issued
Peking University	Empire Technology Development LLC	Japan	9268734	14/602378	Aug 2, 2010	Issued
Peking University	Empire Technology Development LLC	United States of America	9268734	14/602378	Jan 22, 2015	Issued
Peking University	Empire Technology Development LLC	European Patent Office	10855508.7	10855508.7	Aug 2, 2010	Published
Peking University	Empire Technology Development LLC	United States of America	9278876	13/322335	Nov 23, 2011	Issued
Peking University	Empire Technology Development LLC	China	21201080069254.9	201080069254.9	Oct 27, 2010	Issued
Peking University	Empire Technology Development LLC	Japan	5750164	2013-534146	Oct 27, 2010	Issued
Peking University	Empire Technology Development LLC	European Patent Office		10858830.2	Oct 27, 2010	Marked for Infrapring
Peking University	Empire Technology Development LLC	United States of America	9715336	13/520111	Apr 13, 2012	Issued
Peking University	Empire Technology Development LLC	China	2120180068426.5	20180068426.5	Mar 16, 2011	Issued
Peking University	Empire Technology Development LLC	Republic of Korea	10-1452667	10-2013-7010900	Mar 16, 2011	Issued
Peking University	Empire Technology Development LLC	Japan	5852135	2013-549694	Mar 16, 2011	Issued
Peking University	Empire Technology Development LLC	European Patent Office		11860725.8	Mar 16, 2011	Marked for Infrapring
Peking University	Empire Technology Development LLC	United States of America	9546010	13/978700	Jul 8, 2013	Issued
Peking University	Empire Technology Development LLC	United States of America	9122631	13/290146	Nov 7, 2011	Issued
Peking University	Empire Technology Development LLC	United States of America	9235508	14/803074	Jul 19, 2015	Issued
Peking University	Empire Technology Development LLC	United States of America	15/197.458		Jun 29, 2016	Marked for Infrapring
Peking University	Empire Technology Development LLC	United States of America	9411875	13/980573	Jul 18, 2013	Issued
Peking University	Empire Technology Development LLC	United States of America	8178415	12/516493	Oct 20, 2009	Issued
Peking University	Empire Technology Development LLC	Japan		2006-318530	Oct 20, 2009	Published
Peking University	Empire Technology Development LLC	United States of America	8766853	12/516497	Oct 20, 2009	Issued
Peking University	Empire Technology Development LLC	Japan		2006-318531	Nov 27, 2009	Published
Peking University	Empire Technology Development LLC	United States of America	8766802	12/516500	May 27, 2009	Issued
Peking University	Empire Technology Development LLC	Japan		2006-318532	Nov 27, 2009	Published
Peking University	Empire Technology Development LLC	United States of America	8318047	12/516705	Oct 20, 2009	Issued
Peking University	Empire Technology Development LLC	United States of America	8933784	12/516643	Oct 19, 2009	Issued
Peking University	Empire Technology Development LLC	Japan		2006-320337	Nov 28, 2006	Published
Peking University	Empire Technology Development LLC	United States of America	8704202	12/516715	Oct 20, 2009	Issued
Peking University	Empire Technology Development LLC	Japan		2006-320338	Nov 28, 2006	Published
Peking University	Empire Technology Development LLC	United States of America	8237622	12/521244	Jan 12, 2010	Issued
Peking University	Empire Technology Development LLC	Japan		2006-354774	Dec 28, 2006	Published
Peking University	Empire Technology Development LLC	United States of America	8188924	12/513661	May 22, 2008	Published
Peking University	Empire Technology Development LLC	United States of America	8440487	13/404667	May 22, 2008	Issued
Peking University	Empire Technology Development LLC	United States of America		2005-322371	Feb 24, 2012	Issued
Peking University	Empire Technology Development LLC	Japan		2005-322371	May 22, 2005	Published
Peking University	Empire Technology Development LLC	United States of America	8154456	12/513662	May 22, 2008	Issued
Peking University	Empire Technology Development LLC	United States of America	8477072	13/414784	Mar 8, 2012	Issued
Peking University	Empire Technology Development LLC	Japan		2005-322372	Nov 7, 2005	Published
Peking University	Empire Technology Development LLC	United States of America		13/117.7986	Aug 10, 2016	Published
Peking University	Empire Technology Development LLC	United States of America	8971531	12/770466	Apr 29, 2010	Issued

Shanghai Zhiyi Information Technology Ltd	Empire Technology Development LLC	United States of America	9708530	13/085390	May 14, 2013	Issued
Shanghai Zhiyi Information Technology Ltd	Empire Technology Development LLC	United States of America	14/778,366		Sep 18, 2015	Published
Shanghai Zhiyi Information Technology Ltd	Empire Technology Development LLC	United States of America	9891184	14/758421	Jun 29, 2015	Issued
Shanghai Zhiyi Information Technology Ltd	Empire Technology Development LLC	United States of America	9887046	14/758210	Jun 26, 2015	Issued
Shanghai Zhiyi Information Technology Ltd	Empire Technology Development LLC	United States of America	15/507,552	15/507,552	Feb 28, 2017	Published
Shanghai Zhiyi Information Technology Ltd	Empire Technology Development LLC	United States of America	4402150	2008-217167	Feb 8, 2017	Marked for Impairing
Shibaura Institute of Technology	Empire Technology Development LLC	Japan				
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8221650	12/405764	Aug 26, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8470201	13/925019	Mar 17, 2009	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8306371	12/665435	Jun 14, 2012	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Japan	437064	2008-218289	Dec 18, 2009	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	7956678	12/365404	Aug 27, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Japan	4247307	2008-543811	Feb 4, 2009	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	7881492	12/665601	Dec 14, 2007	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Japan	4131874	2008-512075	Dec 18, 2009	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	7787654	12/665308	Sep 21, 2007	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Japan	4456663	2009-529454	Dec 17, 2009	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8335407	12/665635	Feb 25, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Japan	4547447	2008-185635	Dec 18, 2009	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8307424	12/354463	Jul 17, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Republc of Korea	10-1052147	10-2008-0085539	Jan 15, 2009	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8308930	12/23339	Aug 29, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	7968935	12/197961	Sep 18, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Republc of Korea	10-1036551	10-2008-0116502	Aug 25, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Germany	5254765	102008057066	Nov 21, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Japan	5254765	2008-310448	Nov 13, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	China	21200810180594.3	200810180594.3	Dec 5, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8350602	13/085206	Apr 18, 2011	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Republc of Korea	10-1045128	10-2008-0075897	Aug 4, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8221779	12/238306	Sep 25, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Germany	102008051159	102008051159.5	Oct 10, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Japan	5336140	2008-257967	Oct 3, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	China	21200810172612.3	200810172612.3	Nov 4, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Republc of Korea	10-1071325	10-2008-0076382	Aug 5, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8245393	12/234529	Sep 19, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	14/632,082		Feb 13, 2015	Marked for Impairing
Shibaura Institute of Technology	Empire Technology Development LLC	Republc of Korea	10-1144401	10-2008-0114587	Nov 18, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Japan	5371814	2013-050899	Dec 5, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	4729095	2008-310521	Aug 26, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	China	21200810180799.1	200810180799.1	Dec 5, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Japan	5546424	2010-253555	Dec 5, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	9596762	13/365115	Feb 2, 2012	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Germany	102008060645.6	102008060645.6	Dec 5, 2008	Published
Shibaura Institute of Technology	Empire Technology Development LLC	Republc of Korea	10-0975641	10-2008-0076585	Aug 5, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8345366	12/211006	Sep 15, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Germany	102008060644	102008060644.8	Dec 5, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Japan	4825863	2008-310488	Dec 5, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	China	21200810182767.5	200810182767.5	Dec 4, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Republc of Korea	10-1033273	10-2008-0028188	Mar 27, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	7887736	12/234560	Sep 19, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Japan	5666085	2008-240313	Oct 13, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	China	21200810161892.8	200810161892.8	Oct 13, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8455084	12/085581	Jan 6, 2011	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Republc of Korea	10-1033276	10-2010-0104770	Mar 27, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Japan	5766823	2014-001036	Sep 19, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Germany	10200807346.9	10200807346.9	Nov 14, 2008	Published
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8734929	12/197754	Aug 25, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Republc of Korea	10-1075669	10-2008-0121169	Aug 21, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8070929	12/196092	Aug 21, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Germany	102008060290	102008060290.6	Dec 3, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Japan	4975005	2008-310600	Dec 3, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	China	21200810182781.5	200810182781.5	Dec 4, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8137521	12/194361	Aug 19, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	Republc of Korea	10-1077291	10-2008-0104524	Oct 24, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	7814565	12/199733	Aug 27, 2008	Issued
Shibaura Institute of Technology	Empire Technology Development LLC	United States of America	8021640	12/198815	Aug 26, 2008	Issued

SNU R8DB FOUNDATION	Empire Technology Development LLC	Republic of Korea	10-1172567	10-2008-0122038	Dec-3, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		8287695 13/210274	Aug 15, 2011	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		7959842 12/198835	Aug 26, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	Republic of Korea	10-1149157	10-2008-0122028	Dec-3, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		8673258 12/192024	Aug 14, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	Republic of Korea	10-1083276	10-2008-0103507	Oct 22, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		8357346 12/195347	Aug 20, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	Republic of Korea	10-1095696	10-2008-0121346	Dec-2, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	Japan	4769284	2008-310451	Dec-3, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	China	21200810182917.2	200810182917.2	Dec-5, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	Germany		102008059801.1	Dec-1, 2008	Published
SNU R8DB FOUNDATION	Empire Technology Development LLC	Republic of Korea	10-1075622	10-2008-0101655	Oct 16, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	Republic of Korea	10-1049702	10-2008-0084827	Aug 29, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	Republic of Korea	10-1118007	10-2011-0028948	Aug 29, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		7915800 12/234491	Sep 19, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		8232716 13/03065	Feb 17, 2011	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		7917966 12/191694	Aug 21, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	Japan	5027100	2008-310618	Dec-3, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	China	21200810182908.3	200810182908.3	Dec-5, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		8113811 12/200447	Aug 28, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		8501064 13/346094	Jan 9, 2012	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		9044881 12/197994	Aug 25, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		8216658 12/195330	Aug 20, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		8157986 12/199358	Aug 27, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	Republic of Korea	10-1065432	10-2008-0111733	Nov 11, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		8366916 13/404517	Feb 24, 2012	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		8153249 12/198790	Aug 26, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		8043702 12/197968	Aug 25, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	Republic of Korea	10-1088116	10-2008-0112658	Nov 13, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	Republic of Korea	10-1061966	10-2008-0084082	Aug 27, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	Republic of Korea	10-0986781	10-2008-0084556	Aug 28, 2008	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		8432049 12/836733	Jul 15, 2010	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	United States of America		8487835 12/767924	Apr 27, 2010	Issued
SNU R8DB FOUNDATION	Empire Technology Development LLC	Republic of Korea	10-1495969	10-2012-7019636	Dec 15, 2010	Issued
Sukho Jung	Empire Technology Development LLC	Japan	5525653	2013-507863	Dec 15, 2010	Issued
Sukho Jung	Empire Technology Development LLC	China	21201080066367.3	201080066367.3	Dec 15, 2010	Issued
Sukho Jung	Empire Technology Development LLC	Brazil		BR112012027170	Dec 15, 2010	Pending
Sukho Jung	Empire Technology Development LLC	United States of America		7358640 11/665337	Apr 13, 2007	Issued
Sukho Jung	Empire Technology Development LLC	Japan	4504317	2006-009005	Jan 17, 2006	Issued
Sukho Jung	Empire Technology Development LLC	European Patent Office	1974487	07707273.4	Jan 17, 2007	Issued
Sukho Jung	Empire Technology Development LLC	United States of America		8054866 12/161128	Jul 16, 2008	Issued
The Doshisha	Empire Technology Development LLC	Republic of Korea	10-1023004	10-2008-7017487	Jan 17, 2007	Issued
The Doshisha	Empire Technology Development LLC	China	21200780003227.X	200780003227.X	Jan 17, 2007	Issued
The Doshisha	Empire Technology Development LLC	Germany	1974487	602007045289.9	Jan 17, 2007	Issued
The Doshisha	Empire Technology Development LLC	France	1974487	07707273.4	Jan 17, 2007	Issued
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The Doshisha	Empire Technology Development LLC	United States of America		8103170 12/1986971	Aug 22, 2008	Issued
The Doshisha	Empire Technology Development LLC	Japan	5057327	2007-239028	Sep 14, 2007	Issued
The Doshisha	Empire Technology Development LLC	United States of America		7799715 12/209851	Sep 12, 2008	Issued
The Doshisha	Empire Technology Development LLC	United States of America		7893000 12/857283	Aug 16, 2010	Issued
Thiagarajar College of Engineering	Empire Technology Development LLC	United States of America		8862063 13/710346	Dec 10, 2012	Issued
Thiagarajar College of Engineering	Empire Technology Development LLC	United States of America		8670720 13/710330	Dec 10, 2012	Issued
Thiagarajar College of Engineering	Empire Technology Development LLC	United States of America		9014440 12/647116	Dec 24, 2009	Issued
Thiagarajar College of Engineering	Empire Technology Development LLC	India		2759/CHE/2009	Nov 11, 2009	Published
Thiagarajar College of Engineering	Empire Technology Development LLC	United States of America		8699785 12/938195	Nov 2, 2010	Issued
Thiagarajar College of Engineering	Empire Technology Development LLC	United States of America		8948462 14/228806	Mar 28, 2014	Issued
Tokyo Denki University	Empire Technology Development LLC	Japan	5142366	2007-283885	Oct 31, 2007	Issued
Tokyo Denki University	Empire Technology Development LLC	United States of America		7976416 12/196100	Aug 21, 2008	Issued
Tokyo Denki University	Empire Technology Development LLC	Japan	5240987	2007-332562	Dec 25, 2007	Issued
Tokyo Denki University	Empire Technology Development LLC	United States of America		9140445 12/195943	Aug 21, 2008	Issued
Tokyo Denki University	Empire Technology Development LLC	Japan	5072097	2008-010239	Jan 21, 2008	Issued
Tokyo Denki University	Empire Technology Development LLC	United States of America		7679940 12/182882	Jul 30, 2008	Issued
Tokyo Denki University	Empire Technology Development LLC	Japan	5376625	2008-201434	Aug 5, 2008	Issued
Tokyo Denki University	Empire Technology Development LLC	United States of America		8972370 12/196086	Aug 21, 2008	Issued
Tokyo Denki University	Empire Technology Development LLC	United States of America		8606842 12/196002	Aug 21, 2008	Issued
Tokyo Denki University	Empire Technology Development LLC	Japan		2008-153259	Jun 11, 2008	Published

Tokyo Denki University	Empire Technology Development LLC	United States of America	8394455	12/17/5128	Jul 17, 2008	Issued
Tokyo Denki University	Empire Technology Development LLC	Japan	5322256	2007-289858	Nov 7, 2007	Issued
Tokyo Denki University	Empire Technology Development LLC	United States of America	7839241	12/19/1900	Aug 14, 2008	Issued
Tokyo Denki University	Empire Technology Development LLC	United States of America	7639348	10/28/6148	Apr 5, 2007	Issued
Tokyo Denki University	Empire Technology Development LLC	United States of America	8279439	12/439441	Feb 27, 2009	Issued
Tokyo Denki University	Empire Technology Development LLC	Japan	4936477	2008-531980	Jun 14, 2007	Issued
Tokyo Denki University	Empire Technology Development LLC	Japan	5078064	2007-017747	Jan 29, 2007	Issued
Tokyo Denki University	Empire Technology Development LLC	United States of America	8286509	12/524254	Jul 23, 2009	Issued
Tokyo Denki University	Empire Technology Development LLC	Japan	5190860	2007-037073	Jan 22, 2007	Issued
Tokyo Denki University	Empire Technology Development LLC	United States of America	8421999	12/523917	Jul 21, 2009	Issued
Tokyo Denki University	Empire Technology Development LLC	United States of America	8797510	13/7860674	Apr 11, 2013	Issued
Tokyo Denki University	Empire Technology Development LLC	Japan	4308871	2007-539917	Oct 6, 2006	Issued
Tokyo Denki University	Empire Technology Development LLC	United States of America	8039879	12/089855	Apr 10, 2008	Issued
Tokyo Denki University	Empire Technology Development LLC	China	21200680038062.5	200680038062.5	Oct 6, 2006	Issued
Tokyo Denki University	Empire Technology Development LLC	European Patent Office	1946701	06811405.7	Oct 6, 2006	Issued
Tokyo Denki University	Empire Technology Development LLC	Republic of Korea	10-0971936	10-2008-7011215	Oct 6, 2006	Issued
Tokyo Denki University	Empire Technology Development LLC	Germany	1946701	602006038022.4	Oct 6, 2006	Issued
Tokyo Denki University	Empire Technology Development LLC	Japan	5557368	2009-106852	Apr 24, 2009	Issued
Tokyo Denki University	Empire Technology Development LLC	United States of America	8330948	12/712760	Feb 25, 2010	Issued
Tokyo Denki University	Empire Technology Development LLC	Japan	4712879	2009-036476	Feb 19, 2009	Issued
Tokyo Metropolitan University	Empire Technology Development LLC	United States of America	9322596	12/708410	Feb 18, 2010	Issued
Tokyo Metropolitan University	Empire Technology Development LLC	Japan	5103540	2011-062115	Feb 19, 2009	Issued
Tokyo Metropolitan University	Empire Technology Development LLC	Japan	4597246	2009-137085	Jun 8, 2009	Issued
Tokyo Metropolitan University	Empire Technology Development LLC	United States of America	8269165	12/999434	Dec 16, 2010	Issued
Tokyo Metropolitan University	Empire Technology Development LLC	United States of America	8507851	13/590033	Aug 20, 2012	Issued
Tokyo Metropolitan University	Empire Technology Development LLC	Japan	4699335	2009-05283	Mar 5, 2009	Issued
Tokyo Metropolitan University	Empire Technology Development LLC	United States of America	7934703	11/888020	Sep 10, 2007	Issued
Tokyo Metropolitan University	Empire Technology Development LLC	United States of America	8735537	13/131343	Jun 6, 2011	Issued
Tomono Akira	Empire Technology Development LLC	Japan	5653186	2013-512717	Jun 6, 2010	Issued
Tongji University	Empire Technology Development LLC	United States of America	9290610	14/255715	Apr 17, 2014	Issued
Tongji University	Empire Technology Development LLC	United States of America	8907015	13/133936	Jun 9, 2011	Issued
Tongji University	Empire Technology Development LLC	China	21201080067236.7	201080067236.7	Jun 4, 2010	Issued
Tongji University	Empire Technology Development LLC	European Patent Office	2576645	2013-52718	Jun 4, 2010	Issued
Tongji University	Empire Technology Development LLC	Japan	5703372	2013-512718	Jun 4, 2010	Issued
Tongji University	Empire Technology Development LLC	United Kingdom	2576645	602010023202.2	Jun 4, 2010	Issued
Tongji University	Empire Technology Development LLC	Germany	2576645	10852371.3	Jun 4, 2010	Issued
Tongji University	Empire Technology Development LLC	France	2278645	10852371.3	Jun 4, 2010	Issued
Tongji University	Empire Technology Development LLC	China	2120101026288.6	20101026288.6	Jun 4, 2010	Issued
Tongji University	Empire Technology Development LLC	China	2120121024796.3	20121024796.3	Jul 9, 2010	Issued
Tongji University	Empire Technology Development LLC	United States of America	8753380	13/376440	Jun 21, 2011	Marked for Infringing
Tongji University	Empire Technology Development LLC	United States of America	9358055	14/288266	Dec 6, 2011	Issued
Tongji University	Empire Technology Development LLC	United States of America	8709048	13/376502	May 27, 2014	Issued
Tongji University	Empire Technology Development LLC	United States of America	8992577	14/208877	Dec 6, 2011	Issued
Tongji University	Empire Technology Development LLC	United States of America	9238589	12/950262	Mar 13, 2014	Issued
Tongji University	Empire Technology Development LLC	United States of America	9492662	14/127640	Dec 19, 2013	Issued
Tongji University	Empire Technology Development LLC	United States of America	8394643	13/382888	Jan 6, 2012	Issued
Tongji University	Empire Technology Development LLC	China	21201180064572.0	201180064572.0	Mar 3, 2011	Issued
Tongji University	Empire Technology Development LLC	China	21201180062705.0	201180062705.0	Feb 25, 2011	Issued
Tongji University	Empire Technology Development LLC	United States of America	8361323	13/481656	May 25, 2012	Issued
Tongji University	Empire Technology Development LLC	China	21201180070172.0	201180070172.0	Apr 25, 2011	Issued
Tongji University	Empire Technology Development LLC	United States of America	8735166	13/505059	Apr 30, 2011	Issued
Tongji University	Empire Technology Development LLC	China	21201180069824.9	201180069824.9	Apr 7, 2011	Issued
Tongji University	Empire Technology Development LLC	United States of America	9063109	14/251396	Apr 11, 2014	Issued
Tongji University	Empire Technology Development LLC	United States of America	8445868	13/503349	Apr 20, 2012	Issued
Tongji University	Empire Technology Development LLC	China	21201180064579.2	201180064579.2	Mar 14, 2011	Issued
Tongji University	Empire Technology Development LLC	United States of America	9217725	13/835837	Feb 22, 2013	Issued
Tongji University	Empire Technology Development LLC	United States of America	8845905	13/821391	Mar 7, 2013	Issued
Tongji University	Empire Technology Development LLC	United States of America	9952173	15/021917	Mar 14, 2016	Issued
Tongji University	Empire Technology Development LLC	United States of America	9901347	12/791816	Jun 1, 2010	Issued
Tongji University	Empire Technology Development LLC	United States of America	9486249	13/439251	Apr 4, 2012	Issued
Tongji University	Empire Technology Development LLC	United States of America	9282968	12/951803	Nov 22, 2010	Issued
Tongji University	Empire Technology Development LLC	China	21201080070310.0	201080070310.0	Nov 23, 2010	Issued
Treus Medical, Inc.	Empire Technology Development LLC	European Patent Office	10860303.5	20060303.5	Nov 23, 2010	Published
Treus Medical, Inc.	Empire Technology Development LLC	European Patent Office	08856414.1	08856414.1	Nov 26, 2008	Marked for Infringing
Treus Medical, Inc.	Empire Technology Development LLC	United States of America	14/8104231	14/8104231	Jul 27, 2013	Published
University of British Columbia	Empire Technology Development LLC	United States of America	9962521	13/997036	Jun 21, 2013	Issued

University of British Columbia	Empire Technology Development LLC	United States of America	8519189	13/5064841	Apr 27, 2012	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	8637008	13/458899	Apr 27, 2012	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9095666	14/098184	Dec 5, 2013	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	10111902	14/629408	Feb 23, 2015	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	15/887,561		Feb 2, 2018	Published
University of British Columbia	Empire Technology Development LLC	United States of America	9370628	13/324587	Dec 13, 2011	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9289584	13/509387	May 11, 2012	Issued
University of British Columbia	Empire Technology Development LLC	Republic of Korea	9886352	13/024761	Mar 18, 2013	Issued
University of British Columbia	Empire Technology Development LLC	China	201280072728.4	10-2014-7028428	Apr 27, 2012	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	15/874,433		Apr 27, 2012	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	12/628,721		Jan 18, 2010	Published
University of British Columbia	Empire Technology Development LLC	United States of America	8546092	12/632437	Dec 1, 2009	Published
University of British Columbia	Empire Technology Development LLC	United States of America	8541645	12/633437	Dec 7, 2009	Issued
University of British Columbia	Empire Technology Development LLC	China	201080066676.0		Dec 8, 2009	Issued
University of British Columbia	Empire Technology Development LLC	European Patent Office	10649329.7		Jun 8, 2010	Issued
University of British Columbia	Empire Technology Development LLC	Germany	602010049108.0		Jun 8, 2010	Issued
University of British Columbia	Empire Technology Development LLC	United Kingdom	2555799		Jun 8, 2010	Issued
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University of British Columbia	Empire Technology Development LLC	Brazil	BR1120120158104		Nov 10, 2010	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	8391602	12/756612	Nov 10, 2010	Marked for Infringing
University of British Columbia	Empire Technology Development LLC	United States of America	8644616	13/755728	Apr 8, 2010	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	8750619	14/142209	Jan 31, 2013	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9024011	13/377493	Dec 27, 2013	Issued
University of British Columbia	Empire Technology Development LLC	China	201080067120.3		Dec 9, 2011	Issued
University of British Columbia	Empire Technology Development LLC	European Patent Office	10852465.3		Dec 2, 2010	Issued
University of British Columbia	Empire Technology Development LLC	Germany	602010040488.9		Dec 2, 2010	Issued
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University of British Columbia	Empire Technology Development LLC	United Kingdom	10852465.3		Dec 2, 2010	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9354170	13/376102	Dec 2, 2011	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9002782	13/496705	Mar 16, 2012	Issued
University of British Columbia	Empire Technology Development LLC	Republic of Korea	10-2013-7002233		Nov 30, 2010	Issued
University of British Columbia	Empire Technology Development LLC	Japan	5629821	2013-513766	Nov 30, 2010	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	8640068	13/497477	Mar 21, 2012	Issued
University of British Columbia	Empire Technology Development LLC	Japan	5726330	2013-547915	Mar 3, 2011	Issued
University of British Columbia	Empire Technology Development LLC	Republic of Korea	10-1534121	10-2013-7019972	Mar 3, 2011	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9390213	14/150110	Jan 8, 2014	Issued
University of British Columbia	Empire Technology Development LLC	India	0019/KOL/2011		Jan 8, 2014	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9068939	13/503815	Jan 7, 2011	Published
University of British Columbia	Empire Technology Development LLC	United States of America	8638434	13/513068	Apr 24, 2012	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	8982344	14/134899	May 31, 2012	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9897543	14/364574	Dec 19, 2013	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9133450	13/091605	Jun 11, 2014	Issued
University of British Columbia	Empire Technology Development LLC	China	201280068750.1		Jun 4, 2013	Issued
University of British Columbia	Empire Technology Development LLC	India	0095/KOL/2012		Apr 14, 2012	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	15/141,629		Jan 31, 2012	Published
University of British Columbia	Empire Technology Development LLC	United States of America	9359265	13/825661	Apr 28, 2016	Allowed
University of British Columbia	Empire Technology Development LLC	China	201280069826.2		Mar 22, 2013	Issued
University of British Columbia	Empire Technology Development LLC	Australia	2012369910		Aug 7, 2012	Issued
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University of British Columbia	Empire Technology Development LLC	India	0154/KOL/2012		Aug 7, 2012	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9459210	13/884721	Feb 15, 2012	Published
University of British Columbia	Empire Technology Development LLC	United States of America	9493763	14/413635	May 10, 2013	Issued
University of British Columbia	Empire Technology Development LLC	India	0754/KOL/2012		Jan 8, 2015	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9715514	13/879804	Jun 9, 2012	Published
University of British Columbia	Empire Technology Development LLC	China	201380076562.8		Dec 3, 2013	Issued
University of British Columbia	Empire Technology Development LLC	China	201380076562.8		Aug 22, 2015	Published
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University of British Columbia	Empire Technology Development LLC	China	21201410401014.4		Aug 8, 2014	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9790529	14/455699	Aug 11, 2014	Issued
University of British Columbia	Empire Technology Development LLC	China	201410392448.2		Aug 8, 2014	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9577260	14/309554	Aug 11, 2014	Marked for Infringing
University of British Columbia	Empire Technology Development LLC	United States of America	14/455,387		Jun 19, 2014	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9748368	14/902480	Aug 8, 2014	Published
University of British Columbia	Empire Technology Development LLC	China	201380078344.8		Dec 31, 2015	Issued
University of British Columbia	Empire Technology Development LLC	United States of America	9748616	14/464420	Aug 23, 2013	Issued
University of British Columbia	Empire Technology Development LLC	China	201380078344.8		Aug 20, 2014	Issued

University of Calicut	Empire Technology Development LLC	China	Z1201410410702.7	201410410702.7	Aug 20, 2014 Issued
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University of Calicut	Empire Technology Development LLC	United States of America		15/658.027	Jul 24, 2017 Published
University of Calicut	Empire Technology Development LLC	United States of America		9726596 14/39790	Nov 12, 2014 Published
University of Calicut	Empire Technology Development LLC	United States of America		9759668 14/910809	Feb 8, 2016 Issued
University of Calicut	Empire Technology Development LLC	United States of America		9975773 14/547311	Nov 19, 2014 Issued
University of Calicut	Empire Technology Development LLC	India		0151/KOI/2014	Feb 5, 2014 Published
University of Calicut	Empire Technology Development LLC	India		9222216 14/681849	Apr 8, 2015 Issued
University of Hyderabad	Empire Technology Development LLC	United States of America		0445/KOI/2014	Apr 9, 2014 Published
University of Hyderabad	Empire Technology Development LLC	Japan		2014-541491	Nov 24, 2010 Issued
University of Manitoba	Empire Technology Development LLC	Republic of Korea	6006328	10-2014-7017353	Nov 24, 2011 Issued
University of Manitoba	Empire Technology Development LLC	United States of America	10-1686498	9483888 14/394679	Oct 15, 2011 Issued
University of Manitoba	Empire Technology Development LLC	United States of America		8866087 13/977893	Jul 1, 2013 Issued
University of Manitoba	Empire Technology Development LLC	United States of America		9435901 14/319740	Jun 30, 2014 Issued
University of Manitoba	Empire Technology Development LLC	Republic of Korea	10-1766952	10-2014-7028156	May 2, 2012 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8507605 13/093547	Feb 23, 2011 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		9051486 13/262886	Oct 4, 2011 Issued
University of Ottawa	Empire Technology Development LLC	China	Z1201180064118.5	8704005 13/979589	Jul 12, 2013 Issued
University of Ottawa	Empire Technology Development LLC	China		201180064118.5	Mar 17, 2011 Issued
University of Ottawa	Empire Technology Development LLC	European Patent Office	2686367	11861093.0	Mar 17, 2011 Issued
University of Ottawa	Empire Technology Development LLC	Germany	2686367	602011024189.3	Mar 17, 2011 Issued
University of Ottawa	Empire Technology Development LLC	France	2686367	11861093.0	Mar 17, 2011 Issued
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University of Ottawa	Empire Technology Development LLC	United States of America		9250280 14/357770	May 13, 2014 Issued
University of Ottawa	Empire Technology Development LLC	Germany	112013007199	112013007199.1	Jun 26, 2014 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		9813931 14/446155	Jul 29, 2014 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		9723490 14/353580	Jul 18, 2014 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		1003722 15/023894	Mar 22, 2016 Issued
University of Ottawa	Empire Technology Development LLC	China		201380079813.8	Sep 24, 2013 Published
University of Ottawa	Empire Technology Development LLC	United States of America		8004793 12/200737	Aug 28, 2008 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8223457 13/185270	Jul 18, 2011 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		7658650 12/178842	Aug 26, 2008 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8368990 12/545678	Aug 21, 2009 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8681411 13/758115	Feb 4, 2013 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8368047 12/606880	Oct 27, 2009 Issued
University of Ottawa	Empire Technology Development LLC	Japan	5903383	2012-555137	Oct 22, 2010 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8809834 12/498228	Jul 6, 2009 Issued
University of Ottawa	Empire Technology Development LLC	Japan	5374643	2012-514896	Jul 2, 2014 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		9397249 14/322465	Jul 2, 2014 Issued
University of Ottawa	Empire Technology Development LLC	European Patent Office		10797264.8	Jul 5, 2010 Published
University of Ottawa	Empire Technology Development LLC	United States of America		8748862 12/498455	Jun 29, 2009 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8367925 12/493800	May 26, 2009 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8373153 12/472168	May 26, 2010 Issued
University of Ottawa	Empire Technology Development LLC	Republic of Korea	10-1355983	10-2011-7030713	Aug 20, 2014 Issued
University of Ottawa	Empire Technology Development LLC	Germany	5984885	2014-167511	May 26, 2010 Published
University of Ottawa	Empire Technology Development LLC	United States of America		112010002092.2	Jul 6, 2009 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8227793 12/498204	May 31, 2012 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8802461 13/485241	Nov 18, 2009 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8058641 12/620602	Oct 24, 2011 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8524517 13/279945	Nov 17, 2010 Issued
University of Ottawa	Empire Technology Development LLC	Republic of Korea	10-1259328	10-2012-7009054	Apr 30, 2009 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		1021432967	Apr 27, 2010 Issued
University of Ottawa	Empire Technology Development LLC	China	5744845	2012-508397	Apr 27, 2010 Issued
University of Ottawa	Empire Technology Development LLC	China	Z1201080028653.6	201080028653.6	Apr 27, 2010 Marked for Impairing
University of Ottawa	Empire Technology Development LLC	Germany		112010001867.7	Jul 6, 2009 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8395141 12/498257	Apr 27, 2009 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8247881 12/430447	Apr 27, 2010 Issued
University of Ottawa	Empire Technology Development LLC	Republic of Korea	10-1322364	10-2011-7028107	Oct 27, 2009 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8264224 12/606852	Oct 22, 2010 Marked for Impairing
University of Ottawa	Empire Technology Development LLC	European Patent Office		10827017.4	Jun 11, 2009 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		7889107 12/482997	Jun 11, 2010 Issued
University of Ottawa	Empire Technology Development LLC	Republic of Korea	10-1282236	10-2012-70002430.8	Nov 24, 2009 Issued
University of Ottawa	Empire Technology Development LLC	Germany		112010002430.8	Nov 24, 2009 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8558237 12/625314	Nov 19, 2010 Issued
University of Ottawa	Empire Technology Development LLC	Republic of Korea	10-1383991	10-2012-7009053	Sep 11, 2013 Issued
University of Ottawa	Empire Technology Development LLC	United States of America		8704248 14/023926	

University of Seoul Industry Cooperation Foundation	Empire Technology Development LLC	United States of America	8828764	14/12/25368	Mar 25, 2014	Issued
University of Seoul Industry Cooperation Foundation	Empire Technology Development LLC	United States of America	8671369	12/63375	Dec 8, 2009	Issued
University of Seoul Industry Cooperation Foundation	Empire Technology Development LLC	Japan	5537669	2012-543022	Dec 6, 2010	Issued
University of Seoul Industry Cooperation Foundation	Empire Technology Development LLC	United States of America	9147019	14/173422	Feb 5, 2014	Issued
University of Seoul Industry Cooperation Foundation	Empire Technology Development LLC	United States of America	8270782	12/659388	Jan 28, 2010	Issued
University of Seoul Industry Cooperation Foundation	Empire Technology Development LLC	United States of America	8708901	12/6500931	Dec 30, 2009	Issued
University of Seoul Industry Cooperation Foundation	Empire Technology Development LLC	European Patent Office	8289022	112726652	Jan 29, 2010	Issued
University of Southern California	Empire Technology Development LLC	United States of America	9444496	13/835486	Jan 25, 2011	Published
University of Texas at Austin	Empire Technology Development LLC	United States of America	8285900	12/372536	Mar 15, 2013	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	8694704	13/615264	Feb 17, 2009	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	9571399	14/247098	Sep 13, 2012	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	8307116	12/487781	Apr 7, 2014	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	8565331	20109806867.5	Jun 19, 2009	Issued
University of Texas at Austin	Empire Technology Development LLC	China	20108006867.5	20108006867.5	Aug 20, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	Republic of Korea	10-1432065	10-2013-7006792	Aug 20, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	Japan	5584363	2013-524827	Aug 20, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	European Patent Office	2606619	10856243.0	Aug 20, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	Germany	2606619	602010034017.1	Aug 20, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	United Kingdom	2606619	10856243.0	Aug 20, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	France	2606619	10856243.0	Aug 20, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	8514913	12/999266	Dec 15, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	Republic of Korea	10-1414036	10-2013-7002956	Jul 16, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	Japan	5557957	2013-519641	Jul 16, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	8958499	12/997831	Dec 13, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	Republic of Korea	10-1438536	10-2013-7003580	Jul 16, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	Japan	5487363	2013-519640	Jul 16, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	8711961	12/836843	Jul 15, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	8798120	12/727069	Mar 18, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	8407274	12/785040	May 21, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	12/827,906	12/827,906	Jun 30, 2010	Marked for Inpatifing
University of Texas at Austin	Empire Technology Development LLC	United States of America	8415968	12/847571	Jul 30, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	9369132	13/795816	Mar 12, 2013	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	9293351	13/274001	Oct 14, 2011	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	9853135	15/006818	Jan 26, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	15/833,579	15/833,579	Dec 6, 2017	Published
University of Texas at Austin	Empire Technology Development LLC	United States of America	8503350	12/540724	Aug 13, 2009	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	8508471	12/540843	Aug 13, 2009	Issued
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University of Texas at Austin	Empire Technology Development LLC	Republic of Korea	10-1354095	10-2012-7024239	Dec 13, 2010	Issued
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University of Texas at Austin	Empire Technology Development LLC	Japan	6438904	2016-051810	Dec 13, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	United States of America	8545866	12/507938	Dec 13, 2010	Pendfing
University of Texas at Austin	Empire Technology Development LLC	Republic of Korea	10-1354013	10-2012-7003974	Jul 23, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	Japan	5799012	2012-520551	Jul 23, 2010	Issued
University of Texas at Austin	Empire Technology Development LLC	Australia	2010275152	2010275132	Jul 23, 2010	Issued
University-Industry Cooperation Group of Kyung Hee University	Empire Technology Development LLC	European Patent Office	10-1451237	10802485.2	Jul 23, 2010	Published
University-Industry Cooperation Group of Kyung Hee University	Empire Technology Development LLC	United States of America	5709853	2012-514893	Jun 16, 2009	Issued
University-Industry Cooperation Group of Kyung Hee University	Empire Technology Development LLC	Republic of Korea	2013-235747	2013-235747	Jun 15, 2010	Issued
University-Industry Cooperation Group of Kyung Hee University	Empire Technology Development LLC	Japan	10-1524119	10-2013-7032920	Nov 14, 2013	Issued
University-Industry Cooperation Group of Kyung Hee University	Empire Technology Development LLC	Republic of Korea	9082278	12/272961	Mar 19, 2010	Issued
University-Industry Cooperation Group of Kyung Hee University	Empire Technology Development LLC	United States of America	5596801	2012-556959	Dec 17, 2010	Issued
University-Industry Cooperation Group of Kyung Hee University	Empire Technology Development LLC	China	21201080050940.1	201080050940.1	Dec 17, 2010	Issued
University-Industry Foundation, Yonsei University	Empire Technology Development LLC	United States of America	10-1084435	10-2008-0069850	Jul 11, 2008	Issued
Virginia Tech Intellectual Properties Inc.	Empire Technology Development LLC	United States of America	8295341	12/609011	Oct 30, 2009	Issued
Virginia Tech Intellectual Properties Inc.	Empire Technology Development LLC	United States of America	8290086	12/634251	Dec 9, 2009	Issued
VTT University	Empire Technology Development LLC	United States of America	8797953	13/018477	Feb 1, 2011	Issued
Washington State University	Empire Technology Development LLC	China	21201280022052.8	201280022052.8	May 9, 2012	Issued
Washington State University	Empire Technology Development LLC	United States of America	21201480026163.5	201480026163.5	Sep 25, 2015	Marked for Inpatifing
Washington State University	Empire Technology Development LLC	United States of America	14/780,492	14/780,492	Oct 9, 2015	Published
Washington State University	Empire Technology Development LLC	China	201510649273.3	201510649273.3	Oct 7, 2015	Published

Washington State University	Empire Technology Development LLC	United States of America	2719003	9865870	14/112359	Nov 26, 2013	Issued
Washington State University	Empire Technology Development LLC	European Patent Office	2719003	12796057.3	12796057.3	Jun 2, 2012	Issued
Washington State University	Empire Technology Development LLC	Republic of Korea	10-1708291	10-2014-7000256	10-2014-7000256	Jun 2, 2012	Issued
Washington State University	Empire Technology Development LLC	Germany	2719003	602012034789.9	602012034789.9	Jun 2, 2012	Issued
Washington State University	Empire Technology Development LLC	France	2719003	12796057.3	12796057.3	Jun 2, 2012	Issued
Washington State University	Empire Technology Development LLC	United Kingdom	2719003	12796057.3	12796057.3	Jun 2, 2012	Issued
Washington State University	Empire Technology Development LLC	United States of America	2534720	9493885	13/756000	Aug 20, 2012	Issued
Washington State University	Empire Technology Development LLC	European Patent Office	2534720	11742898.7	11742898.7	Feb 11, 2011	Issued
Washington State University	Empire Technology Development LLC	Germany	2534720	602011041327.9	602011041327.9	Feb 11, 2011	Issued
Washington State University	Empire Technology Development LLC	France	2534720	11742898.7	11742898.7	Feb 11, 2011	Issued
Washington State University	Empire Technology Development LLC	United Kingdom	2534720	20118000838.2	20118000838.2	Feb 11, 2011	Issued
Washington State University	Empire Technology Development LLC	China	2534720	15/287.367	15/287.367	Oct 6, 2016	Marked for Infringing
Washington State University	Empire Technology Development LLC	United States of America	5808480	8722254	13/636027	Sep 19, 2012	Issued
Washington State University	Empire Technology Development LLC	United States of America	5808480	2014-506627	2014-506627	May 9, 2010	Issued
Washington State University	Empire Technology Development LLC	Japan	5808480	9614250	14/223017	Mar 26, 2014	Issued
Washington State University	Empire Technology Development LLC	United States of America	5808480	9714341	14/778436	Sep 18, 2015	Issued
Washington State University	Empire Technology Development LLC	United States of America	5808480	973547	14/689442	Dec 14, 2015	Issued
Washington State University	Empire Technology Development LLC	United States of America	5808480	9724213	14/443867	May 19, 2015	Issued
Washington State University	Empire Technology Development LLC	United States of America	5808480	14/761.268	14/761.268	Jul 15, 2015	Marked for Infringing
Washington State University	Empire Technology Development LLC	United States of America	5808480	9290324	13/837904	Mar 15, 2013	Issued
Washington State University	Empire Technology Development LLC	United States of America	5808480	9598445	14/982431	Dec 29, 2015	Issued
Washington State University	Empire Technology Development LLC	United States of America	5808480	8524461	13/21316	Nov 18, 2011	Issued
Washington State University	Empire Technology Development LLC	China	21201080068487.7	201080068487.7	201080068487.7	Nov 9, 2010	Issued
Washington State University	Empire Technology Development LLC	India	21201080068487.7	0863/KOL/2010	0863/KOL/2010	Aug 5, 2010	Published
Washington State University	Empire Technology Development LLC	European Patent Office	21201080068487.7	10855559.0	10855559.0	Nov 9, 2010	Marked for Infringing
Washington State University	Empire Technology Development LLC	United States of America	21201080068487.7	9359584	13/126109	Apr 26, 2011	Issued
Washington State University	Empire Technology Development LLC	India	21201080068487.7	0599/KOL/2010	0599/KOL/2010	Jun 1, 2010	Published
Washington State University	Empire Technology Development LLC	United States of America	21201080068487.7	13/881.148	13/881.148	Jul 9, 2011	Published
Washington State University	Empire Technology Development LLC	United States of America	21201080068487.7	8398856	13/380767	Dec 23, 2011	Issued
Washington State University	Empire Technology Development LLC	Japan	21201080068487.7	2014-51457	2014-51457	Jul 28, 2011	Issued
Washington State University	Empire Technology Development LLC	India	21201080068487.7	0789/KOL/2011	0789/KOL/2011	Jun 10, 2011	Published
Washington State University	Empire Technology Development LLC	United States of America	21201080068487.7	8749120	13/580945	Aug 23, 2012	Issued
Washington State University	Empire Technology Development LLC	Republic of Korea	21201080068487.7	10-1624430	10-2014-7008441	Oct 28, 2012	Issued
Washington State University	Empire Technology Development LLC	Japan	21201080068487.7	5593103	2014-534908	Oct 28, 2011	Issued
Washington State University	Empire Technology Development LLC	United States of America	21201080068487.7	9034468	13/884403	May 9, 2013	Issued
Washington State University	Empire Technology Development LLC	China	21201080068487.7	201180074122.X	201180074122.X	Nov 29, 2011	Issued
Washington State University	Empire Technology Development LLC	Japan	21201080068487.7	5860972	2014-541502	Dec 22, 2014	Marked for Infringing
Washington State University	Empire Technology Development LLC	United States of America	21201080068487.7	9774004	15/030037	Apr 15, 2016	Issued
Washington State University	Empire Technology Development LLC	United States of America	21201080068487.7	15/117.395	15/117.395	Aug 8, 2016	Marked for Infringing
Washington State University	Empire Technology Development LLC	United States of America	21201080068487.7	15/555.893	15/555.893	Sep 5, 2017	Allowed
Washington State University	Empire Technology Development LLC	China	21201080068487.7	201580077465.X	201580077465.X	Mar 11, 2015	Published
Washington State University	Empire Technology Development LLC	United States of America	21201080068487.7	15/298.018	15/298.018	Oct 31, 2016	Published
Washington State University	Empire Technology Development LLC	United States of America	21201080068487.7	14/761.544	14/761.544	Jul 16, 2015	Marked for Infringing
Washington State University	Empire Technology Development LLC	United States of America	21201080068487.7	15/092.531	15/092.531	Apr 27, 2016	Marked for Infringing
Washington State University	Empire Technology Development LLC	United States of America	21201080068487.7	15/111.231	15/111.231	Jul 13, 2016	Marked for Infringing
Washington State University	Empire Technology Development LLC	United States of America	21201080068487.7	PCT/CN2016/085713	PCT/CN2016/085713	Jun 14, 2016	Marked for Infringing
Washington State University	Empire Technology Development LLC	PCT	21201080068487.7	PCT/CN2016/082176	PCT/CN2016/082176	May 16, 2016	Marked for Infringing